FINANCING READINESS: A HANDBOOK FOR INTERNATIONAL ENERGY PROJECT DEVELOPERS

Consultant Report

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ABSTRACT

The intended audience for this Handbook is developers who may have a good understanding of one or more aspects of the development process, but who need a better understanding of the all aspects and how the parts integrate into a whole. Also, the goal of this Handbook is to provide a guide for what to do and when to do it. In general, each expert in the various aspects of project development (e.g. legal, financial, engineering, permitting, and insurance) will recommend that their specialty be attended to first, which can be difficult advice to follow.

The difficulty of obtaining financing is often cited as the biggest challenge to developing electric power generation projects. Yet bankers and investors compete with each other to get into select projects. In conferences, workshops, and articles in the trade press, there is quite a bit of advice available about what makes a project desirable from the point of financing decision makers. While it is important to know how the project should end up, the path there is not usually clear. The purpose of this Handbook is to provide a road-map for how to make a project that will ultimately be eligible for financing.

The title of this Handbook is *Financing Readiness*, and it is the hope of the authors that a developer may use this Handbook to conduct an honest assessment relating to several questions: How ready is the project for financing? What development tasks needs to be done, and in what order? What are the chances that the project can successfully come together or will it be a waste of time and money?

We hope that these questions stimulate thought and action that will result in more success for California companies seeking to export valuable experience gained in pioneering independent power and renewable energy.

This Handbook is divided into five sections. Section 1 is a guide for the developer in self-assessing skills, resources, competitive advantages, and other factors that affect ultimate success in developing an energy project.

Section 2 covers how to select opportunities to pursue, bearing in mind the capabilities of the development team, the risks, and the time-frame in which success must be achieved.

Section 3 gives an overview of what tasks are appropriate in what we call “early development” and how much money and time may be appropriate at this stage.

Section 4 covers secondary stage development, including more detailed agreements and more in-depth research into all aspects of feasibility.

Section 5 covers “advanced stage” development, which includes all the steps leading up to breaking ground and commencement of construction, and some aspects of power plant commissioning.

We have provided additional resources for further research in the exhibits to this Handbook.

The chart on page 11 shows the development process and decision making. The relevant portion of the chart will be referred to at the beginning of each section to show how the material relates to the overall process.

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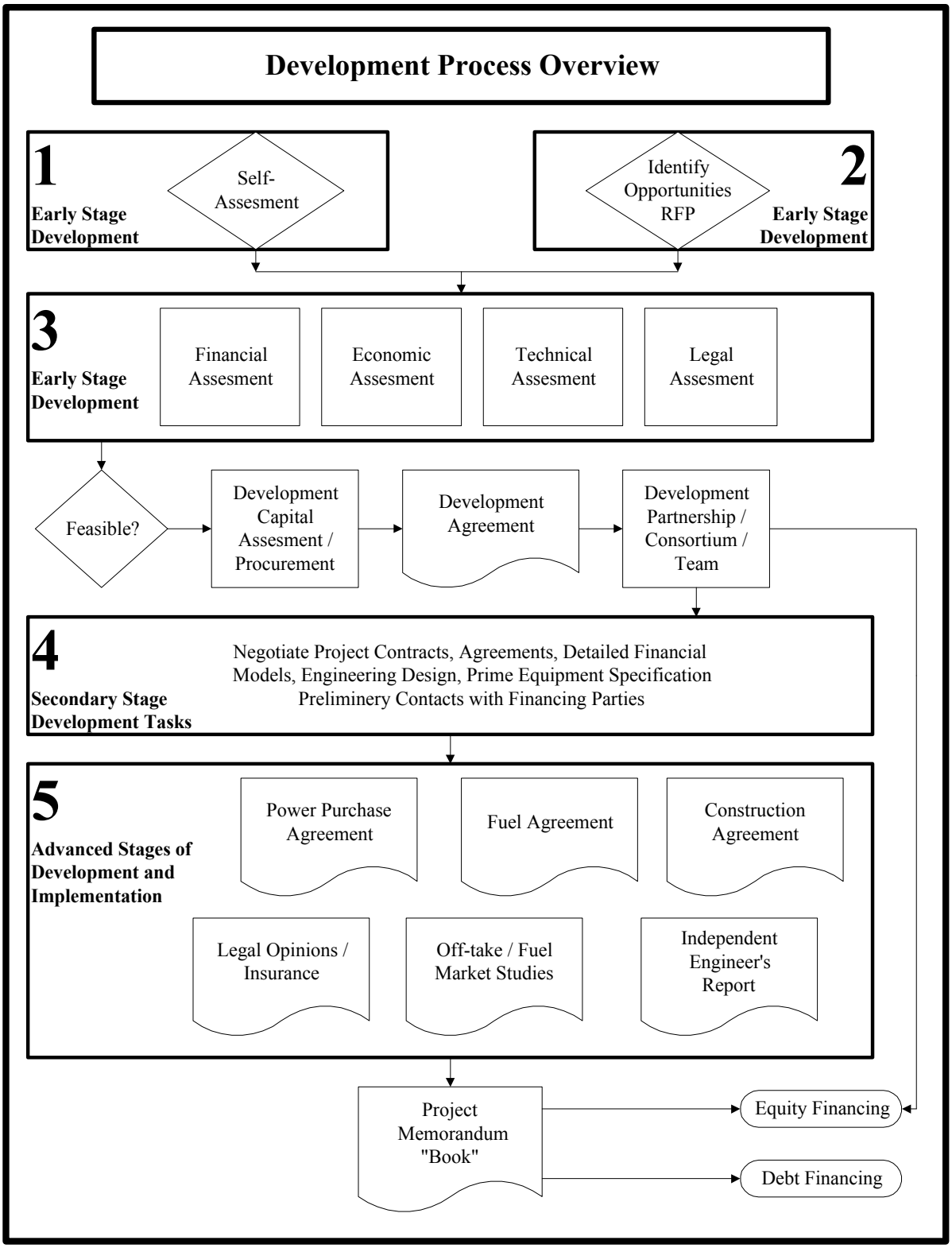
INTRODUCTION

The course of energy project development never runs smoothly. The tasks and timing presented may occur out of sequence or not at all. Each project is unique, and usually there are difficult judgment calls made using imperfect information and conflicting advice. It is not the assertion of the authors that there is some kind of formula that, if followed, will lead to success. Despite the difficulty of setting forth “rules,” it is hoped that the issues and questions raised in this Handbook will stimulate forethought to avoid past mistakes.

New developments are continually arising in world energy markets that will certainly make parts of this Handbook obsolete.

Despite the changing landscape of the electric power industry, and despite the wide diversity of projects, some key points emerge: 1) the development effort needs to be balanced so that appropriate effort is expended in all aspects at any given time during development, 2) the requirements and criteria of outside financing parties needs to be considered at all times, and finally, 3) risks and returns should be balanced appropriately for all parties at all times.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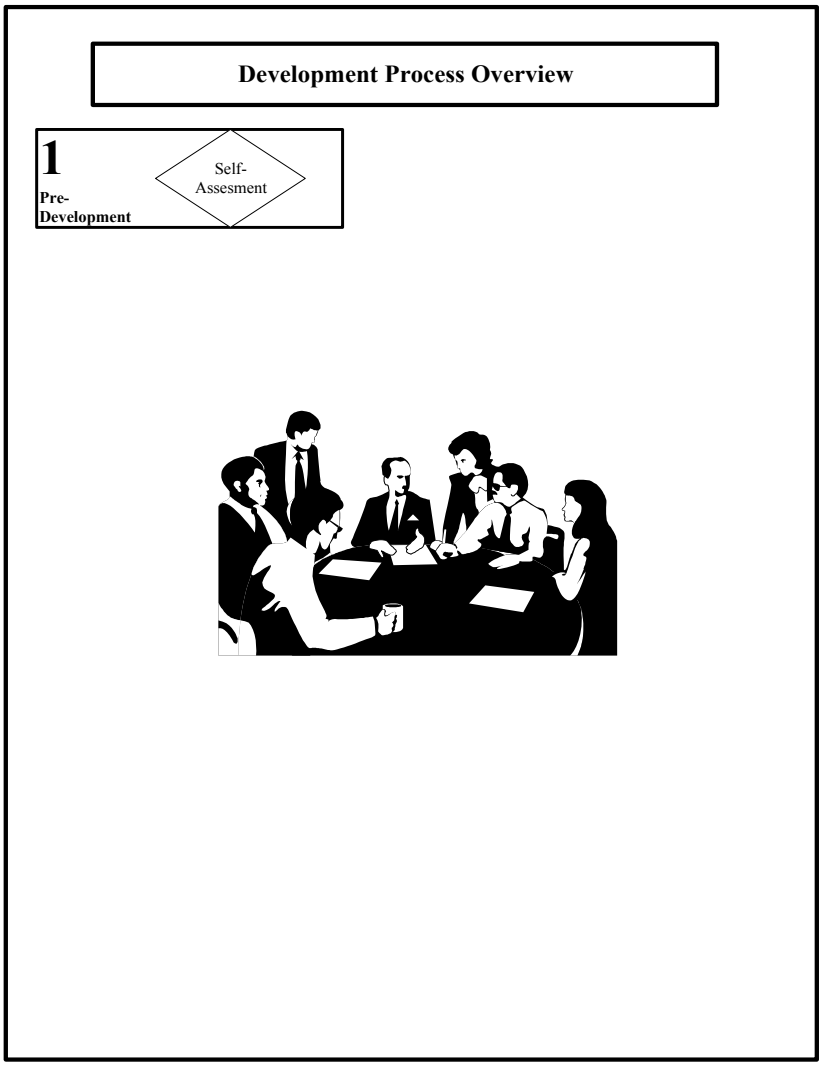
SECTION 1: SELF-ASSESSMENT



Developer Self-Scoring Test

One of the crucial first steps in developing an energy project is to make an assessment of the strengths and weaknesses of the developer (sometimes called the sponsor or promoter). The following test was developed to give an indication to the developer about how close is a project is to being able to get financing, and how strong is the case for financing the project.

The rating scheme is comprised of most influential factors that lenders and equity investors consider in deciding whether or not to provide financing. The five factors are 1) developer experience, 2) project size, 3) country in which the project is located, 4) technology, and 5) status of the key contracts. Each factor gets a score of 1 to 3, where 1 is bad and 3 is good. The assessment for judging individual factors are provided in the accompanying table.

For example, a project in the United States gets a score of 3 for location, whereas Ukraine gets a score of 1. A GE frame 7FA-based project gets a technology score of 3; a solar photovoltaic gets a 1 and probably another 1 for size. See the table for more information on scoring the individual factors.

The most unique approach to our self-rating scheme is that the “Financing Readiness Quotient,” or FRQ, has factors that have a multiplicative relationship to the total. The

five factors are each evaluated on a scale of one to three. Then, the score on individual dimensions is multiplied together and the total is divided by 2.43, so that the scale can run from 1 to 100. A score of 100 means the project can start closing financing immediately. A score of 1 (or .4 for the truly compulsive) means that it is highly unlikely the project will be financed.

During development a project score moves up (hopefully) as contracts are signed (status factor: 5), and as stronger partners enter the picture (developer experience: factor 1). Some factors may not move around, such as country and technology: a wind project in China remains a wind project in China throughout development.

On the other hand, a gas project may start out based on used equipment, and then switch to new equipment when the engineers discover that bankers do not correctly understand the cost/benefit analysis of used equipment. Neither banker nor engineer is wrong: the used equipment solution may not get financing and the new equipment may kill the economics. The goal is to have a project both bankable (low risk) and profitable (high return).

This multiplicative process was done so that a poor score on one dimension would bring the total down quickly, and if two dimensions are low, the result is very low indeed. It was designed to make it difficult to get a high score.

Our experience at PPF is that if all factors are presenting high, chances of financing is high and financing may occur soon. If only one factor is low then financing is still within reach, maybe even with two low factor scores, but if three factors have weak scores, it means that financing may be possible, but certainly will be a long way off.

For example, suppose a developer with no prior experience (developer experience score 1) has a project in India (country score 2), using conventional gas technology (technology score 3), 100 MW (size score 2), has won a bid to sell electricity to a strong buyer and has key siting permits (project status score 2), then the total financing readiness score would be 24 divided by 2.43, or about 10, not very ready at all!

Suppose the developer is well-experienced and has done similar projects in India and has deep pockets (developer experience score 3). Now the total is 72 divided by 2.43 or about 30, which is still pretty low. Move the project from India (2) to the U.S. (3) and the FRQ changes from 30 to 44, which may seem low at first for a big gas-fired project in the U.S. being developed by an experienced developer, but just such a project did fail, proving that the scale works.

When we looked back at some of our projects that obtained financing in the past year or so, we found that the promising projects tended to take several years to come together, even when all the factors were presenting fairly high. That led us to conclude that an

additive scale was inappropriate because single factors can break a project even when many other factors are positives.

Developer Self-Scoring Test (page 1 of 2)

Success Factor		High = 3	Medium = 2	Low = 1
1	Developer Experience	Developer team in place; Has done similar projects at same company.	Developer has experience in necessary tasks with similar projects at other companies or same company with dissimilar projects (e.g., hydro vs. coal projects)	First attempt at project development in lead role. Experience in individual disciplines does not count.
2	Size	Well over 50 MW	About 20 MW to 50 MW	Well under 20 MW
3	Country	Investment grade rated; Strong economy. Active well-regarded sovereign and corporate borrowing. Top 15- 20 risk ranking of all countries. Examples: US, UK, Japan, Germany, Australia.	Emerging market country; Low or below investment grade, but still ranked; Strongly growing economy; Large populations; strong natural resources and/or low-cost labor; legal system OK. Examples: China, India, Brazil, Indonesia, Poland	Troubled economy; unstable political situation; Lack of policy consensus amongst business; Government, labor. Poorly situated, Poorly endowed natural resources. Examples: Uganda, former Soviet Union, Myanmar, Zaire, Yemen.
4	Technology	Proven technology used from large company; Strong warranties.	New model of proven technology or new application of proven technology	New technology, First commercial application or significant scale-up.
5	Status of Contracts	All contracts executed and drafted as per international standards for project financing.	Competitive bid awarded or key meaningful and exclusive Letter of Intent or Memorandum of Understanding is signed.	Nothing in writing committed. Meetings do not count.

Developer Self-Scoring Test (page 2 of 2)

Scoring:
Step 1: Score 1 to 3 for each success factor
Step 2: Multiply success factor scores.
Step 3: Divide by 2.43

Total Score	Description
100	Ready to close financing; as certain as is possible.
60 - 100	Project looks very good; very likely to succeed.
40 - 60	A typical good project, perhaps six months from financing.
20 - 40	A promising project may have many hurdles to go, probably 1 - 2 years to go in development.
1 - 20	An early stage project with very high risk or with an unqualified sponsor.
1	Almost certainly a lost cause, never eligible for commercial financing.

Developer Checklist

Every professional in the field of power plant development and financing has a checklist for judging the viability of a project. The following generic checklist was developed in order to save time reviewing new projects and to help energy project developers seeking financing.

The good news is that successful financing can be guaranteed if the checklist is followed. The bad news is that the checklist is so detailed and comprehensive that it is rather imposing. What happens in real life is that energy project developers take on a little bit of an extended risk profile in one area, or they may move ahead on a project with a little more commitment and a little sooner than may be fully justified. In other words, developers are looking for 80 – 90 percent compliance with the checklist.

The checklist has 16 main points, comprising major areas of total feasibility for an independent power project. Note that some issues are dependent on the project: for example, a hydroelectric project will have no fuel supply agreement; however, there are many areas in common and the risk allocation process always has to make sense.

Developer Profile

The issue is who the developer (also called sponsor, backer, proposer) of the project is and their qualifications. Venture capitalists say that management is the most important factor in the investment decision; not product, technology, or business plan, but management (people, experience, track record). The same is true in independent power project development and finance.

Do members of the development team have backgrounds in relevant sectors of electric power, project finance, law, regulatory relations, and business administration? What projects were done by this group? What role did they actually have in the projects? What familiarity with the country is evidenced? What information is available on the developer, the company, financial data, projects, and plans?

All developers have a lopsided expertise portfolio. The better developers recognize this and shore up weak areas with additional employees, contractors, and by strategic alliance.

Project Status

A power project evolves from concept to electric generation in many stages, usually grouped into phases of development, construction, and operation. During development,

the project takes shape through negotiation and written documentation of increasingly specific levels of detail and increasing commitment.

The term “project status” is a measure of how far along the project is in development: is it just an idea, is there a preliminary letter of letter, or is there a power purchase contract? Basically, what is signed and committed, and by what party? Also, are there obvious “deal killers” such as financing or local support which have not been worked out?

The project status can be evaluated by going through a checklist such as this and judging what has been completed and what remains to be done.

Economics

The project economics measure how profitable the proposed project is, meaning how much money you put in and how much money you get out.

For project developers at the early stages, there should be a simple, base-case answer to two questions: 1) how much does the project cost to build, and 2) what is the projected profit? After those two questions are answered, the next issues are: 1) does the risk justify the investment, and 2) what is the best financing deal to get the money for the investment?

Sometimes, project economic calculations can be very complex: one $10 million project had financial projections totaling 100 pages of numbers and 32 pages of footnotes. However, this level of detail is only appropriate for advanced development (Section 5).

Power Sales

Having a power purchase agreement is necessary but the purchasing utility must be creditworthy as well.

In the early stages of developing a project, there needs to be some type of evidence that a creditworthy buyer will commit to purchase electricity on a basis that justifies the investment. Such evidence can be a letter of intent, a memorandum of understanding, a draft power purchase agreement, or any other document that sets forth the “deal.”

A developer was seeking financing for a large coal-fired project using conventional technology and with a signed power purchase agreement. Unfortunately, the utility slated to purchase the power had a negative net worth, negative annual cash flow, tariffs way below cost, and 40 percent losses of its generation due to theft. Hence, the PPA was not finance able.

The PPF checklist provides many other points to consider such as interconnection, coordination with other contracts, and guarantees. For example, there must be a linkage between fuel prices and power prices so the project is not caught in a squeeze between revenues and expenses.

While new ground is being broken with respect to financing plants on a merchant basis, these are only the province of big corporate sponsors, and any project financing for merchant plants has been very limited. So, for the entrepreneurial developers, the tried-and-true risk allocation formulas must be followed if a finance-ready project is the goal.

Engineering/Feasibility Study

This area deserves the least amount of time and effort during early development. Engineering is usually not as difficult compared to other issues such as power sales, fuel, foreign exchange, financing, regulation, and legal framework.

The specifications for a 50 MW cogeneration project in Seattle would have similar engineering if it were in China, Chile, or Chad. But, the other aspects of the project - legal, financing, and foreign exchange - are very different propositions in each case. Usually, too much time is spent on engineering feasibility when the commercial and legal aspects are relatively unexplored.

After the early development period results in some evidence that power can be sold to creditworthy buyer, preliminary engineering should be done, as well as preliminary environmental work, siting analysis, utilities interconnection, and other basic physical considerations.

Fuel Supply, Hydrology, Wind Resource

The fuel supply needs to determined from the mine-mouth (or the well-head, or the river source, as the case may be) all the way to the burner-tip. The above anecdote is meant to convey that the big elements of the fuel supply need to be sketched out in a detailed manner appropriate for the project's particular stage of development.

The source of supply, the transportation, and the cost are the key elements of fuel supply; however, another critical issue is what happens if the fuel is not available. Does the supplier make up lost profits? What credit stands behind any promises made by the fuel supplier? Are there alternative supplies available? What events are "force majeure", allowing the fuel supplier off the hook? Will the power buyer take the risk that fuel supply may be interrupted and make the project whole?

Clearly, it makes a big difference as to who is the fuel supplier. Project financing will only be available with a strong company.

One financier visited the proposed site of a large coal-fired project in China and discovered that no on-site coal handling facilities were planned. In the rush to develop the project and market the deal to investors, this $2 million capital cost item had been overlooked.

Equipment

With rare exceptions, project financing is not available for new technologies and is not available for used equipment unless covered by a like-new guarantee. When it comes to equipment choices, lenders and investors do not want to hear words like innovative, improved, new, state-of-the art, or better. They want to hear words like predictable, proven, stabilized, and ordinary. Venture capital is the proper arena for equipment breakthroughs, not project finance.

The financing effect on equipment choice can be much more dramatic than cost savings on purchase price. A 10 percent savings on the purchase price of a gas turbine may save $1 million up-front, but being able to obtain expert-credit financing can save the investor many millions in cash flow over time.

To get financing, used equipment must have a guarantee that makes it not any more risky than buying new equipment. Sometimes used refurbished equipment can work out, but it raises issues such that the good explanation takes more time than the attention span of the money.

Engineering, Procurement, and Construction

The Engineering, Procurement, and Construction (EPC) contract should provide that the project will be built on-time, under budget, and will perform adequately. This usually is not a significant issue in early development unless the technology is non-standard.

Developers often make the mistake of paying too much attention to EPC matters while the power sales arrangements are in need of development attention. Sometimes, preliminary EPC arrangements are necessary in order to gain a power purchase commitment. Otherwise, this task should be left to do after the power sales and after fuel supply.

Instead of “If you build it they will come,” the rule is: “If you can sell the power you can probably get it built.”

Operation and Maintenance

Like EPC, the issues here are usually not that difficult to work out compared to those presented in power sales and fuel. Many qualified Operation and Maintenance (O&M) operators are available, plus the O&M cost is a relatively small percentage of the electric price. The details of O&M may be safely left until relatively later in development process.

Regulatory, Legal

Legal and regulatory issues are fundamental to successfully developing a power project. What does a contract mean in the host country? What reliance can be placed in the regulatory system? If project financing is planned to used, then the developer needs to know what the financing community thinks of the legal and regulatory landscape for the country in question and what financing will be available.

This can be difficult call, since most projects take several years to develop and the legal and regulatory environment can change dramatically in that time frame. Also, the legal and regulatory environment is not usually under the control of the developer.

The checklist issues are meant to ensure that the appropriate financing structure is matched to the prevailing legal and regulatory environment so the money will be there when needed.

Taxation

Since taxes are a given, the question is whether or not the power price and resulting return properly take into account the taxes, import duties, fees, and any other tax-like charge to the project. A project should not leave itself open to return deterioration through new taxes or tax rate increases, so the right pass-through language needs to be included in the power purchase agreement.

Tax lawyers point out that a tax holiday may not be worth much if the end result is to pay U.S. taxes anyway, due to utilizing foreign tax credits. An interesting strategy for U.S.-based full taxpayers is to not seek tax holidays and instead pay taxes abroad, create goodwill in the host country, and then deduct the taxes paid in the U.S. rather than negotiate for tax benefits.

Foreign Exchange

This is a critically important issue that can make or break financing. It should be one of the first considerations in developing a power project, since foreign exchange can affect every cost item, as well as on-going revenues and expenses. Financing parties' opinions about foreign exchange are not usually subject to persuasion, and so project structures need to have foreign exchange denominated properly.

If the developer can finance the project, then foreign exchange does not matter. But if debt or equity financing is going to be needed later, then the foreign exchange consideration is important. There should be some precedent for the assumptions used in the financial model; that is, financing should be identified that was done similarly with respect to foreign exchange.

Insurance

Insurance can be used to mitigate many different risks, each with its own set of costs and benefits. Sometimes developers cite the possible availability of political risk insurance from Overseas Private Investment Corporation (OPIC) or from Multilateral Guarantee Insurance Association (MGIA) without checking to see if it is available for that country and the cost. Also, those institutions do not cover foreign exchange risk in general, but only a subset of risks, and collecting on the policy may require prior arbitration or going all the way through the court system in-country.

Financing

Financing is often cited as the biggest obstacle to development. In fact, financing is only the result of developing a project which deserves financing, and the lack of financing means that the development approach was wrong.

During the development period, the financing question is whether or not there is enough money to do the tasks necessary to make the project attractive to any other party. If the developer has financing wherewithal to build the project, any arrangements may be implemented; however, if additional equity or debt financing is planned to sought, then the right risk profile target must be held as a standard throughout the development.

Risk Analysis

Two points need to be made about risk analysis: 1) risk analysis depends on financing, and 2) financing parties' opinions about risk are usually not subject to much persuasion by the developers' analysis. By thoroughly understanding risk analysis from the perspective of the financing party, the risk analysis will confirm that financing should take place. If the developer is also providing the financing, then the risk analysis is a self-check. If third-party financing is needed, then starting point for risk analysis is the financing viewpoint.

Dispute Resolution

There are standard strategies for dispute resolution, and in addition, the developer should present some data about the results of disputes in prior independent power projects or other commercial disputes.

Checklist Conclusion

When a developer looks at a project with an eye towards financing, they should go through the checklist either explicitly or implicitly. If the "to-do" list is a lot longer than the "done" list, then the project financing work is a long way off. Methodically thinking about every item in the checklist is sure to uncover issues that will come up sooner or later. Dealing with the checklist issues, or having a credible plan to do so, will ensure development and financing success.

Developer Checklist

Developer Profile

A. Biographies of principals, experience in:
   1. Private non-utility power plant development
   2. Project finance, lending, equity investment
   3. Legal: corporate, securities, regulatory
   4. Engineering: power plant, permitting, design
   5. Government relations, legislation, regulatory
   6. Operations and maintenance of power plants
   7. Managing projects of similar size and cost
   8. Energy economics, tariffs
   9. Insurance, taxes, business administration

B. Prior Projects
   1. Background
   2. Role, nature of involvement
   3. Results

C. Current Projects
   1. Background
   2. Role, nature of involvement
   3. Results

D. Experience in Country

E. Corporate Information
   1. Annual report
   2. Ownership
   3. Financial statements
   4. 3rd Party information: industry reports, press

Project Status

A. Status of Key Agreements
   1. Permits
   2. Concession agreement
   3. Project award from competitive bid
   4. License from government
   5. Site control
   6. Status of most critical arrangements:

a. Power purchase
b. Fuel supply
c. Engineering, Procurement and Construction (EPC

B. Schedule to Complete Development
1. Tasks, timing, cost
2. Responsible party
3. Milestones,
4. Deadlines

C. Support for Project
1. Local
2. Regional
3. National
4. Utility

Economics

A. Financial Projections
1. Non-recurring costs:
a. Development cost
b. Financing-related costs
c. Construction cost

2. Annual Cash Flows
a. Revenues
i) Electricity
ii) Steam
iii) By-products
iv) Tipping (for waste to energy)

b. Operating expenses
i) Fuel
ii) Labor
iii) Administration
iv) Insurance
v) Fees

3. Pre-financing economic evaluation
a. Risk adjusted comparison
b. Benchmarks used

4. Taxation

5. Financing cash flows, assumptions
    a. Equity
        i) Comparable projects, investments
        ii) Upside, downside, tax-related

    b. Debt
        i) Comparable debt financing
        ii) Credit analysis

    c. Lease financing

6. Reserves funding, build-up, draw-downs

7. Periodic overhauls

8. Foreign exchange effect

B. Documentation of power pricing:
    1. Contracts: signed, negotiated, or proposed
    2. Forecasts: internal or 3rd party
    3. Regulated tariffs

C. Documentation of operating expenses:
    1. Contracts: signed, negotiated, or proposed
    2. Forecasts: internal or 3rd party
    3. Prior projects, comparable projects
    4. Industry standards

D. Disposition/refinancing/transfer

Power Sales

A. Sales to Utility
    1. Minimum take, take-or-pay, merchant
    2. Competitively awarded, negotiated
    3. Creditworthiness of utility
    4. Supply proposed relative to utility size
    5. Track record honoring IPP contracts
    6. Susceptibility to political influence
    7. Privatization, ownership structure
    8. Economic growth in region

B. Sales to Local Industry
   1. Minimum take, take-or-pay, merchant
   2. Competitively awarded, negotiated
   3. Creditworthiness of industrial
   4. Alternate power purchasers

C. Interconnection, Transmission

D. Penalties, Timing, Deliveries

E. Coordination with Other Contracts
   1. EPC: plant completion versus obligation to deliver power
   2. Fuel: pass-through of price changes, fuel availability effect on obligation to deliver power
   3. O&M and other expenses: pass-through of expense changes in power price

F. Payment Support
   1. Payment guarantees, letter of credit
   2. Implementation agreement
   3. Escrow accounts
   4. Lock-box accounts

Engineering/Feasibility Study

A. Site Suitability
   1. Zoning
   2. Local support

B. Fuel Procurement
   1. Source, distance, transport
   2. Interconnection, on-site handling

C. Proposed Design, Technology, Cost
   1. Equipment efficacy, track record
   2. Cost, financing implication

D. Fuel and Electrical Interconnection
   1. Existing or new interconnection
   2. Ownership
   3. Responsibility to build and maintain
   4. Dedicated or shared

E. Environmental Impact, Need for Study, Exemption
   1. Requirements for legal compliance, financing
   2. Local support impact

F. Power Purchaser Load Profile:
   1. Seasonal fluctuation
   2. Daily fluctuation
   3. Dispatching, curtailment, notice, interval

G. Water Supply and Discharge
   1. Source, specification
   2. Discharge specification
   3. Permitting process, control

H. Ash Disposal for Solid Fuel Projects
   1. Disposal, sales
   2. Composition, change in fuel effect
   3. Governing regulations

I. Emissions controls, options, cost
   1. Standards used
   2. Scrubbers, precipitators, fluid bed

J. Maintenance schedule, overhauls, spares
   1. Prevailing standards in country

K. Other Site Mitigation
   1. Building
   2. Forestation
   3. Noise abatement

Fuel Supply, Hydrology, Wind Resource

A. For hydro or wind projects:
   1. Flow data
   2. Number years/history
   3. Data source

B. For thermal projects:
   1. Fuel contract, term, and supply
   2. Specification
   3. Supplier creditworthiness
   4. Alternate suppliers

5. Coordination with other contracts:
    1. PPA, availability force majeure
    2. EPC, equipment suitability
    3. O&M, e.g., gas clean-up, coal washing
6. Heat content, measurement, billing and payment

Equipment

A. Operational characteristics
    1. History in power application
    2. Efficiency
    3. Reliability
    4. Availability
    5. Environmental: emissions, water needs, water discharge, noise, and visual

B. Cost, payment schedule, delivery deposits
    1. Negotiated or competitive bid
    2. Import duties
    3. Physical delivery considerations

C. Guarantees, creditworthiness for guarantees

D. Financing considerations, export credit, vendor

E. Technology, suitability for remote service
    1. Maintenance expertise required
    2. Fuel sensitivity
    3. Sensitivity to heat, moisture

Engineering, Procurement, and Construction (EPC)

A. EPC contractor:
    1. Qualifications
    2. Experience
    3. Creditworthiness

B. Contract terms:
    1. Fixed price, turn-key,
    2. Wrap-around, subcontractor warranties

C. Guarantees, bonuses, penalties

D. Insurance, retainage

E. Construction schedule, penalties, damages

F. Performance testing
   1. Output
   2. Heat Rate
   3. Availability
   4. Duration of test, standards, derating
   5. Warranty period

F. Start-up, training

Operations and Maintenance

A. Operator qualifications

B. Contract:
   1. Fixed
   2. Variable
   3. Pass-through
   4. Percent of revenues
   5. Incentive, penalties

C. Coordination with power purchaser

D. Guarantees, finance ability

E. Spares, parts delivery

Regulatory, Legal

A. Site control / right to develop / land use
   1. Property rights, Land law
   2. Collateral law, liens, security, foreclosure
   3. Title insurance
   4. Environmental liability
   5. Assignability

B. Permitting: national, local, city

C. Corporate compliance

1. Government approval for local partner
2. Foreign Corrupt Practices Act compliance

D. Environmental compliance and impact

E. Government agency involvement
   1. Environmental
   2. Foreign Investment
   3. Utility regulatory

F. Implementation Agreement
   1. Full-blown IA
   2. Support letter

Taxation

A. National: corporate, JV, or partnership
B. Depreciation treatment,
C. Tax holidays
D. Local, regional
E. Value Added Tax
F. Withholding taxes
G. Tax treaties
H. Other fees, levies, import duties, etc.

Foreign Exchange

A. Source of hard currency
B. Country Creditworthiness, F/X reserves, balance of trade, PPP methodology
C. Fluctuation of exchange rates, historical, projected
D. Project reserves
E. Repatriation
F. Convertibility
G. Risk management strategy
   1. Hedging
   2. Insurance
   3. Hard currency payment

Insurance

A. During construction

1. Builder's all-risk policy
2. Property and casualty
3. Workers' compensation
4. Auto
5. construction/performance bond
6. Cost overrun/delay of completion
7. Project errors and Omissions

B. During Operation
   1. Efficacy, business interruption
   2. Property and casualty
   3. Workers' compensation
   4. Auto
   5. Political risk, foreign exchange
   6. Cost overrun/delay of completion
   7. Project errors and Omissions

Financing

A. Development budget and source of funds
   1. Tasks
   2. Timing
   3. Responsibility
   4. Cost
   5. Expectations of participants

B. Project description & documentation
C. Financial structure, equity contribution
D. Participants benefits, risks
E. Market research confirming financing strategy
F. Timetable

Comprehensive Risk Analysis: Technical or Economic

A. Credit risks
   1. Power Purchaser
   2. Fuel Supplier
   3. EPC contractor
   4. Insurance company
   5. O&M contractor
   6. Guarantor

B. Construction risks
    1. Cost over-run
    2. Lateness
    3. Performance

C. Market and operating risks
    1. Revenue/Expense divergence
    2. Plant performance
    3. Excessive operating expense
    4. Off-taker performance
    5. Competition

D. Financial risks
    1. Interest rate risk
    2. Foreign exchange risk
    3. Inflation

E. Political risks
    1. Expropriation
    2. Change of law
        a. National
        b. State
        c. Tax-related
        d. Environmental

F. Legal risks
    1. Inadequate legal framework
        a. Legislation
        b. Case law
        c. Administrative law
        d. Regulation
    2. International, state, provincial jurisdiction

Dispute Resolution

A. Governing law
B. Mediation
C. Arbitration
D. Track record in proposed country

Capability of Developer

One of the key success factors of developers of international projects is a realistic self-assessment before beginning development activities. While such an assessment is critical to the undertaking of domestic projects, once the leap is made to the international arena, the importance of qualifications is compounded several times over, and so are the issues and hurdles faced by the international developer.

Ultimately, the developer must have either in-house expertise to cover all development tasks, or the capability of forming a team by taking on partners, consultants or additional personnel to cover the gaps. The critical skills and capabilities necessary for development are:

1) General knowledge of the development process, including knowledge of all key project contracts.

2) Sound business practices, management skills and the ability to conduct business in foreign countries.

3) Technical expertise related to project engineering, project management and plant operations.

4) Financial expertise, including knowledge of international business.

5) Ability to make critical connections and develop relationships with key foreign parties.

While it is unlikely that small or medium-size developers possess an appropriate level of these skills, it is necessary to have or acquire a basic knowledge of each. Most commonly, a developer will start with at least a sound capability in at least one or two of the categories, and then take on additional employees, or contract out various tasks to third parties. Each time an additional expert is hired, or a new partner taken on, the profit margins begin to shrink.

It is a very difficult business judgment to allocate scarce development cash, to hire consultants, or to give up equity in the project in exchange for expertise or partnering. Nonetheless, there is no way to avoid acquiring, one way or another, the requisite capabilities. Developers often must be willing to lower their profit exceptions in order to reach success.

Defining Development Role

Once a developer has honestly assessed their in-house skills, expertise, and capabilities, the next task is defining the developer's role in the development process. In general, the lead developer will act as coordinator in bringing together all parties necessary to complete the development process and managing the overall business of project development. The ability to do such an "orchestration" requires general business development skills and project development skills specifically, which is why these skills are at the top of the list. At a minimum, a developer should possess general business skills and some project development skills. If these two are covered, the remaining necessary skills can be contracted out (out-sourced).

The developer's role in either undertaking or managing each development task area should be clearly defined. The importance of defining these roles before undertaking a project is critical for a developer's understanding of what lies ahead, what resources are at their disposal, and how much out-sourcing is needed and the cost involved.

Capital Resources

Probably the most common problem of many small and medium size developers is running out of money to continue project development. While development capital from various sources is available, an early stage developer is still required to get the project to a certain stage before such sources of capital will even look at the project.

Therefore, a developer must make up a basic budget to get the project to a stage where investors, individuals, or other larger developers will either join the developer in partnership, or simply take over the project for a price. The entire cost of development can range from several hundred thousand dollars up to five percent of total project cost of a billion dollar project, or $50 million. For projects in the range of 50 MW, a development budget of $1 million is entirely reasonable.

In the early stages of foreign projects, these costs will consist primarily of travel costs and the cost of maintaining an office and the business as a going concern. The number of trips and people necessary to go on these trips usually will exceed original expectations. Since the first several trips are devoted to relationship-building and getting preliminary project related agreements, the funds to accomplish these tasks must be easily available. Also, these expenditures occur at a point in time when the project has not yet taken shape as a certain success, so the decisions at this stage can look insightful or wasteful depending on how the project turns out.

Depending on the county where the project is located, an early stage developer can count on incurring anywhere from $30K to $100K in travel costs before a project can be

structured enough to attract outside sources of capital. Office costs for at least a year must be added to this amount as well as the cost of hiring consultants to do preliminary technical review and financial modeling if the developer does not have this capability in-house. On occasion, the services of such consultants can be acquired on a speculative basis, or by giving away a piece of equity ownership, but the chances of such cost arrangements are slim unless a superlative opportunity exists.

> Financing assumptions should be made carefully. Equity may not be available on terms that the developer envisions. Debt will not be available on the same terms as an AAA-rated municipal bond, nor equity at price/earnings multiples the same as a regulated utility. These are totally different risk profiles than independent power plants.

If a developer lacks capital for the medium or long term, it is necessary to create an accurate interim budget for getting the project to the stage where providers of development capital will take it seriously. If the developer cannot self-fund this interim budget, and cannot rely on associates to do it, they are better off not undertaking development in the first place.

The chances of attracting such investors are decent if the following factors are present:

- The developer gets preliminary agreements in place through their own resources;
- The developer establishes necessary in-country relationships;
- The project's technology is relatively standard;
- The project is located in a reasonably stable country with some form of currency protection, and,
- A minimum after-tax IRR in the 15 – 25 percent range can be demonstrated for investors.

At the beginning of development, some developers need to secure the mandate for a project, so they may oversell the project to the power purchaser. Elements of "overselling" can include the following mistakes:

- EPC costs too low;
- Power sales price too low, term too short;
- Financing term too long, rate too low, debt amount too high.

Willingness to Risk Time and Capital

Assuming our developer has drawn up a budget for early stage development (prior to using third party capital) and has the necessary capital readily available, the next question is whether the risk to reward ratio warrants the undertaking of the project.

The developer must decide whether they are willing to risk their time and capital on development of the project. Sometimes it is better to abandon development if bankruptcy is the price of failure, if the project is a “make-or-break” situation, or if the developer is not willing to lose all they have invested and walk away from an effort that has gone bad for unforeseen reasons. Then, as stated before, it is better to not continue development in the first place.

The downside considerations should be weighed against the potential reward. Early stage developers who do not contribute any of their own equity toward actual construction costs cannot realistically expect to end up with more than around four or five percent of the projects’ value, split between a development fee and carried equity. The total is often less, and rarely more, for foreign projects.

Commitment to Time Frames

Beyond the ability to understand and commit to the capital requirements of project development, a closely related issue is that of development time-frames. There are no hard and fast rules on this subject. A development period of one year to reach financial closing would be considered very fast while a development period of two to three years may be more typical for project medium size projects, say under 100 MW. A small gas-fired, behind-the-fence, industrial self-generating project, with minimum permitting could take place in perhaps under a year.

It is imperative for the developer to establish a realistic time frame for all development tasks including the time necessary to go through numerous iterations of all agreements, technical studies, government permitting, financial marketing, developing bid documents for vendors and EPC firms, investor due diligence, and legal/financial documentation. In many countries, approval and permits may take a half year each, and cannot be applied for concurrently.

A large coal-fired plant requiring extensive permitting and a convoluted financial structure could take as much as four to five years. For example, the Hub River Project (1,200 MW in Pakistan) was 8 years in development as sponsors sorted out many issues, including Islamic laws prohibiting lending with interest.

Investor and lender due diligence can typically take six months, with documentation taking several months more.

Reaching financial closing always takes longer than anticipated. A developer can take the best time estimate and then prudently double it. The developer must commit to the time frame and have the resources to do so, including unforeseen delays.

In the Paiton Project (1,200 MW, Indonesia), 310 days were spent negotiating the Power Purchase Agreement, according to the developer. The Samalayuca Project (700 MW, Mexico) was virtually stopped for two years from the end of 1994 until 1996, while Mexico underwent wrenching economic and political changes having nothing to do with the project.

Lack of a reasonable assessment of the time frame and its implications from the beginning is a recipe for failure. Planning for the long haul is the most rational course.

Connections

The positioning of this issue as the last item is not meant to undermine its importance. Without the right in-country connections, the developer of a foreign energy project can face a costly dead end. An astute developer willing to devote the time and resources can certainly establish good connections on a deliberate and straightforward basis.

The most common mistake made in establishing connections is that the developer often becomes deeply involved too soon with parties that fail to deliver the promised influence, or are simply a veiled conduit for corruption. This can lead the developer to a worse position than if it had no connections to start with. As with every other aspect of conducting project development in a foreign country, doing the due diligence on potential partners is vital.

A fair majority of developing countries do not have institutional systems of meritocracy, but rather, they have systems that are divided along lines of political and economic power. Many underpaid bureaucrats have incredible power over several aspects of project development. On the other hand, wealthy individuals (or companies) may not be able to do anything to move the project forward if they do not have the right political connections.

At a certain point it is necessary for the developer to form solid relationships with people and organizations that provide a sound and reliable window into the political decision-making system. Such relationships or chains of relationships will ideally span a complete spectrum of the bureaucracy having “yes/no” power over the project.

The importance of local support for the project is often overlooked by developers who take a top-down approach to connections, or who rely on family connections too much. Even in the U.S., it is critical to gain local support for projects so that benefits are distributed fairly and widely.

No matter how strong a developer's connections are, if the locals are not behind the project, they can potentially delay or stop a project. Conversely, even if a project has strong local support, there also must be relationships at the town, city, county, prefecture, provincial and national level. This is necessary to get all project related agreements and approvals in place.

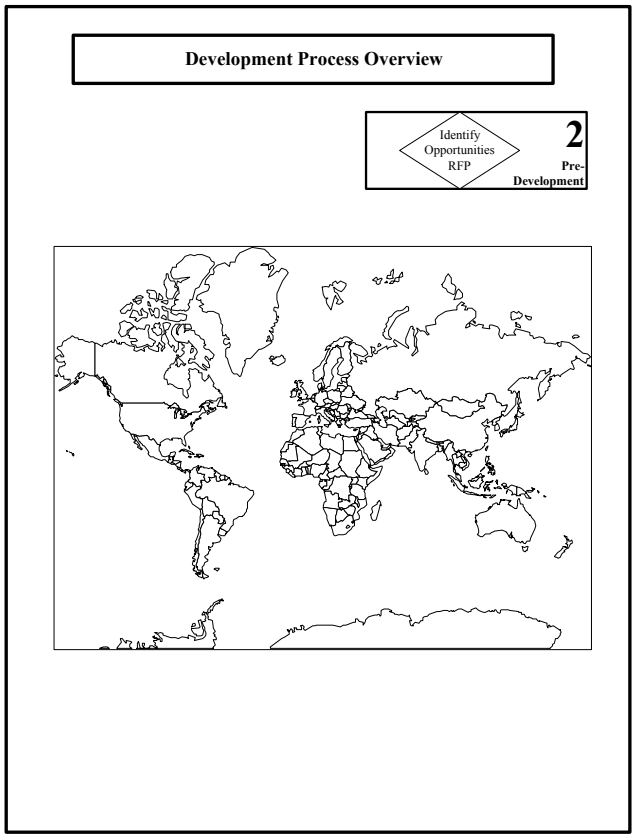
The Dhabol project in India is seen by some as an example in which local support was not obtained until too late in the development process.

Unless a developer has strong in-country connections, it is best to link up with a party that has the most immediate motivation and need in actually securing a reliable supply of power, whether this party is a local factory, town, city, or regional utility, etc. These parties can be directly located through research, government sponsored programs, international power industry seminars, etc.

For negotiated deals, an honest and well-researched proposal to organizations in need of electric power will probably be given a fair chance. Developers must avoid people with "connections-for-sale," and who, for the right price, claim they can facilitate approval of an entire project. Besides being illegal, bribery is an impediment to financing. Even sophisticated and qualified non-U.S. firms not subject to the U.S. Foreign Corrupt Practices Act (FCPA) may pay bribes or facilitation fees, and not always with the desired results. It is good policy to avoid projects requiring any deviation from the FCPA.

It is normal and reasonable to have local partners and/or local agents sign an agreement with the developer that the local partners and/or local agents understand the FCPA, and that they intend to comply with it. The FCPA deserves more attention than can be devoted in this paper, but a key aspect is a record of active due diligence must be maintained to be compliant with the Act.

SECTION 2.
IDENTIFYING THE RIGHT PROJECT OPPORTUNITIES



Assuming the developer has gone through the steps outlined in Section 1, and the developer believes they are qualified, have the necessary funds and proper connections, and have a good local partner, the correct next step is to isolate and focus on good specific project opportunities.

The following tasks cover the main areas that the developer needs to address in identifying projects with a decent chance of success. Savvy developers are marked as much by the ability to turn down unlikely opportunities as they are by the ability to identify good ones.

Reviewing Target Country's Power Industry

Pointing out the need to thoroughly research the realities of the power industry in the target country may seem obvious, yet it is surprising how many developers simply fail to do this. This task is one of the easiest and most cost-effective tasks that a developer can perform in the comfort of their own office.

Basically, one needs to review the respected current publications covering the energy and infrastructure finance events in the country in question. The internet, and phone interviews with industry professionals who have experience with the country, are also invaluable research tools. In the Appendix section of this Handbook, we have provided a list of many useful research publications.

By using whatever resources are available, a developer should become as knowledgeable as possible on the electric power environment in the country, not only for their own purposes, but also for the impression it makes on future potential partners and financiers.

Each developing country is unique, having its own set of pitfalls as well as advantages. No matter how unsuitable some countries may look on the surface, if projects of the size and variety the developer has in mind are getting financed, this bottom line indicator is as good as any.

CMS, subsidiary of the utility Consumers Power, in 1997 financed a project in Morocco, but at the outset of the development process in 1994, Morocco was unbankable. A large developer like CMS has many financing options, unlike the small developer.

Countries with no record of privately financed power projects are best avoided by small developers. Large developers can afford to be pioneers. The conundrum is that the counties with stronger economies attract the better developers and the economically troubled countries, such as Dominican Republic, Uganda, and Armenia, deal with small developers.
Specific areas of energy project development feasibility that need to be researched are:

1) Macro economic condition of the country and stability of currency

2) Micro economic conditions of the local region

3) Political system and stability

4) Policies of various levels of government and utilities related to the IPPs industry

5) Policies related to foreign investors and investment in general

6) What types of projects are getting financed and who is financing them

7) Identifying the problems as well as the success stories of other developers.

Project Selection

Once a developer is convinced that the country in question fits an acceptable risk profile and is a reasonable place to undertake project development activities, the next decision is whether to pursue a Greenfield project or pick up one that already has some history. Included in the Greenfield category would be projects being put out to competitive bid, as well as projects entirely initiated by the developer.

Projects with some history would include those where a local person or company has done some measure of feasibility work, and those which other developers had undertaken but were dropped or sold.

Initiating a project entirely from scratch or developing a project in response to a Request for Proposals (RFP) is a high-risk business and is best left to developers with deep pockets. If one lesson is taken away from this Handbook, it is that developing a project is complex, expensive, time-consuming, and fraught with risk. Just like venture capital, one engages in many prospects relative to the number of successes. If a developer's business plan has only a few projects and a long time-frame, the chances of success are remote. That is why one sees the same "deep-pocket" developers in countries all over the world.

The IPP concept has reached the far corners of most halfway-bankable developing countries, and the vast majority of viable sites has already been identified and probably has some history to them. The exception may be previously overlooked industrial cogeneration opportunities, or industrial powering opportunities for new or yet-to-be-built factories and industrial parks. To identify and secure the rights to such projects requires excellent research and connections with the owners or developers of industrial power consumers.

For the small to medium-sized developer to respond to an RFP is highly risky for the simple reason that the developer will probably find themselves competing against larger and more experienced developers who have a lower cost of capital, which passes through to the ability to offer a lower power price.

Even Cambodia attracted 60 international companies for a 60 MW project. In Malaysia, the 30 MW project at Kuala Lumpur airport attracted the big international players with major banks acting as financial advisors.

About the only advantage smaller developers have over the large firms is that the large firms have larger overhead expenses, which need to be recovered in project energy prices.

For example, there was a RFP in early 1997 for 50 MW in Nicaragua. In spite of the small size and high country risk, this RFP attracted several major oil companies bidding who clobbered the good small players trying to compete.

Another exception to the large developers winning an RFP is that sometimes the RFP is not really a truly competitive RFP, but simply a face-saving way to choose the desired power supplier. Many factors other than simple price enter into such negotiated contracts, and if a smaller developer has the "key to the lock," they can successfully compete.

Picking up a project with some history can be advantageous, as long as the project history is not bad, or at least one that cannot be fixed by some rational solution. The

best projects with some history are those that the local parties have put significant resources into, but are simply lacking the capital, or the ability to access capital in the international markets. In this case, the locals genuinely need the involvement of a foreign developer.

On the other hand, if the locals or the industrial host has the financial resources but simply lacks the technical or development expertise, the developer may be entering a highly risky situation. The risk is that the developer can spend much time and resources on engineering and educating the partner, and then end up being left out at the end of the day if the partner has the financial resources to carry the project to a successful conclusion without further involvement of the developer. If a developer suspects that such a situation exists, then development services should be undertaken on a pay-as-you-go contract basis only.

One major U.S. developer confirmed in an interview that a trip for a single executive to China cost $25,000, when a more thrifty developer could accomplish the same purpose for roughly $3,000.

Acquiring a project stalled in the hands of another developer can also present its own set of risks as well as advantages. If a quality job of development has already been accomplished and the previous developer simply ran out of money, a viable situation may exist if the buyout price, if any, is reasonable. If, however, the project stalled because of bad relations or if the local partner is simply kicking out the previous developer for unjustified reasons, such as not paying a bribe, then the new developer will be assuming a high level of risk and must ask what it takes to succeed where other qualified parties have failed.

Unfortunately, there are no hard and fast rules on deciding on how to best locate a project in a given country.

Each potential project must be approached on a case-by-case basis. Pursuing a poorly conceived project just because a developer has a good connection is a waste of time. The ability to turn such projects down is as necessary as the ability to identify quality opportunities.

Due Diligence on Potential Local Partners

It is difficult for a developer of an international project to succeed without taking on a local partner or local agent in one form or another. The partner may become part of the development team, or may be a joint venture partner holding equity share in the project. The developer's local partner may also act as an in-country advisor assisting in locating quality projects, or may come with a ready-made opportunity for a specific project.

The selection of a partner is critical for many reasons, especially because once a selection is made and a relationship is established, it may be very difficult to back out at a later date.

Some of the factors the developer needs to consider in partner selection are:

1) What is the potential partner's financial position? Will it be able to contribute adequate development funds?

2) What is the potential partner's position within the industry, power or political sector; is the position stable? Do they have any experience in power project development?

3) If the partner is a municipality, government agency, or utility, are they at the appropriate level and do they have the human, financial and political resources to undertake the project?

4) What is the partner's position relative to potential competitors competing for the same project or allocation of rights to supply power? Likewise, does the partner have any significant competitors who may have a vested interest in undermining development efforts?

5) What services will the partner contribute to development? If they claim to have the capacity to provide project equity, it is sensible to verify their financial position or access to government capital?

6) Is the partner authorized under local law to undertake the project? In some countries this is not always clear, and the partner itself may not have a clear understanding of the law.

7) What will be the likely effects of privatization or deregulation of the power sector upon the partner?

8) What up-front or ongoing cost will the partner expect the developer to pay? What is the agreed upon time-frame, and are benchmarks clearly understood?

Finding a Foreign Partner

This subject was already addressed in Section 1, having to do with in-county connections. A developer's in-country agent or consultant may actually end up being the partner, or may assist in locating the right partner for a specific project. If no partners or

connections are at the disposal of the developer, then they can develop and approach such parties on an arms-length basis. In many countries, particularly in Asia, forming such relationships can be extremely difficult if the developer is coming in completely out of the blue.

After conducting thorough research, a developer with absolutely no connections should find some pretext for approaching potential partners. Trade missions, conferences or government outreach programs can and should be utilized. Quite often a direct inquiry to a provincial, municipal government or regional utility will yield a positive response.

Another strategy is to piggyback on the efforts of other direct industrial investors if they can be identified. For example, if the developer is aware that a utility cannot provide power for a planned industrial park, either the utility or the developer of the industrial park may be a valuable lead. Look at the trends in the country's industrialization efforts to identify the likely locations of new loads in manufacturing, metallurgy, cement production, etc. Extensive research and diplomacy will pay off for the developer who lacks connections or pre-existing relationships before entering a new country.

Many developers recommend that participating in a trade mission with the U.S. government or with the California Energy Commission brings entree and prestige abroad.

Economic Rationale of the Project

In their quest for a profitable deal, developers all too often focus on high priced power purchase contracts, sinking much time and energy into development only to find out that no bank or equity investors will provide capital because such power pricing is simply not sustainable on a long term basis.

Ultimately the power provided by the new project must be put to economically productive uses which will yield sufficient economic surpluses to pay not only for the cost of power production but also an adequate return on the developer's capital. In areas where power pricing is supported by heavy subsidies, the risk is high that such subsidies may be revoked down the road, leaving banks and equity providers high and dry. The requirement for a sound economic base is essential.

In some countries or regions, southern and coastal China for example, economic growth is robust and a situation exists where numerous industries are flush with cash to purchase power if it could only be provided. Conversely, in other countries the regional utilities may offer profitable power purchase agreements, but the utility is bankrupt. Developers proceeding with projects in such areas with the hope that investors or lenders will simply look at the overly rich project pro-formas are wasting their time.

In general, behind-the-fence or industrial park opportunities present attractive opportunities if the industrial base is one that is likely to continue to thrive. Supplying power to a declining industry is ill-advised. In many developing countries, industrial users are sometimes willing to sign contract for power at above market rates if they can secure an uninterrupted supply.

One measure of protection that can be taken if the owner of the industry is a foreign investor is to sign an offshore contract with the parent company/owner. For example, if Japanese trading company X is setting up an industrial park with a 100 MW load, the developer signs a contract with the parent company, enforceable outside the country in which the project is located. The financial risk of utility displacement is then assumed by the power buyer.

An important factor in directly supplying power to industrial customers is the risk of being blind-sided by the utility once it is capable of supplying the necessary power. Despite various agreements or contracts in place, if a powerful utility in a developing country decides to displace a private power supply to an industrial park, odds are the utility will win.

Utility demand provides the largest opportunity for developers of foreign projects. In developing countries, the supply system is often a confusing overlay of local, regional, and national grid distribution systems that may be at odds with one another. In general, the developer's goal should be to sell power to as large an entity as possible. Utilities at the provincial or region level are the best bet, provided they are in sound financial condition or can provide a central bank or third party guarantee from a creditworthy institution. If a properly drafted government or central bank guarantee can be provided, then the project risk essentially becomes equal to the country's sovereign risk as long as the project's developer holds up its side of the bargain.

Developers need to do their homework on the credit-worthiness of the power purchaser as well as the underlying economic vitality of the end users. Ascertaining whether the underlying credit behind the PPA is bankable needs to be determined well before going to the bank, and ideally early on, before the developer sinks a significant amount of resources in to the project.

Choosing Project Size and Technology

The importance of choosing the appropriate technology and size for the project is important and should, for the most part, be left to unbiased engineers. Unfortunately developers are bombarded by vendors seeking to sell equipment regardless of the appropriateness, and engineers, on rare occasions, have their own biases.

In developing countries, factors in equipment choice do not just come down to technical issues, but also to issues of logistics, availability of service and parts, and operation and maintenance ("O&M") costs. In many cases, local equipment is perfectly acceptable, and often is the most cost-effective alternative, such as with small coal-fired plants in China. While efficiency is always a factor, the developer is generally better off choosing durable and possibly less-efficient equipment, rather than high-tech, highly efficient equipment for developing country applications. Emerging market countries are no place to test unproved prototypes or new technologies, if for no other reason than that banks and investors aren't willing to shoulder such risks.

For new technologies, it is critical to have an infrastructure of transportation, communications, spare parts, technical know-how, such as is found in a developed country. Some problems are human and technical, for example, the quality control of the fuel supply. This can cause problems with gas-turbines requiring especially clean fuel. In developing countries, it is perhaps important to match the technology to the situation.

Sizing a project should also be a relatively straight forward exercise, matching supply to present and near future loads. Often it is not. In some cases governments seek to build showcase projects that are grossly out-of-line with reality and the developer must educate these agencies as to the folly of their thinking without giving offense. If future loads are anticipated, a wise choice is to engineer a plant for phased expansion. For example, an LNG port or a coal port may support several projects once the infrastructure is built in place. Likewise, a river may offer several hydroelectric plants along a cascade. Electric power planners need to balance cost, demand growth, and cost of power.

Another important factor on equipment choice in the early phases of project development is choosing equipment that banks are willing to finance. Developers fail to recognize that their own short term profit motivations are often at odds with those of parties being asked to finance the project. Taking an approach of doing a "back-of-the-envelope" job that will allow the developer to recoup it's entire investment and a tidy profit in the space of four or five years, simply will not fly with banks that are being asked to provide debt terms of 10 to 15 years.

Identifying Restrictions

Again while identifying basic restrictions seems obvious, it is surprising how often it is overlooked. Such restrictions, too numerous to list entirely, would include:

1) How is fuel supplied to the project? If it is a local coal mine, what are the reserves? If it is imported petroleum, what are the

transportation/distribution restrictions and what is the government policy? If it is renewable energy, what is the seasonally of the resource and supply: the wind regime, insulation, or hydrology? If it is gas-fired, how close, and what is the capacity of the nearest pipeline? In short, a complete fuel plan is necessary.

2) What is the condition of the transmission system, can it carry the supply the developer intends to provide. How close is transmission to the project site, what substation may need to be built, who is responsible for transmission extensions etc.?

3) What does the utility supply curve look like thorough out the year? Does the buyer only want to buy power during the dry season from thermal plants and then turn them off when abundant hydro power is available? If the developer is building a smaller plant, does the utility plan a mammoth plant near by that will be given preference once it is on-line?

Basic Financial Modeling

Beyond considering all the above basic qualities of a project, if no major red flags have popped up, then the developer's most pressing question will be the degree of profitability of the project. Does it make sense in basic economic terms? A first cut financial model does not need to be very sophisticated. Simple inputs of estimates for construction (capital costs), fuel costs, operating costs, and power price (including utilization rates), the developer can build a simple financial model without the use of overpriced and expensive financial consultants.

The inputs at this point will probably be estimates that the developer acquires through various means: construction firms, equipment vendors, fuel suppliers, and O&M firms. They should be willing to give an approximate price range for their services for the country in question. Some technologies such as gas turbine systems have a surprisingly narrow range of costs worldwide, while other systems can have prices all over the map.

The oft-cited rule of thumb of $1 million per megawatt (and more for coal and renewable) is no longer true. Projects using Chinese and Russian equipment can lower costs. Also fierce competition amongst gas turbine suppliers is bringing down costs.

In general, prices of power equipment have been coming down in the past few years. If the developer is relying on costs based on local feasibility studies, the best policy is to see what other similar recently built plants actually cost, and compare this number to that in the feasibility study. Much of this information is available in industry literature.

Fuel costs should also be readily available from local fuel suppliers. If fuel must be shipped from a long distance the developer must get an “as-delivered” price that fully reflects all transportation, handling, storage, and import tax costs. Fuels specifications and plant heat rate need to be taken into consideration to develop a preliminary financial model, and the developer must make sure the specifications meet the requirements of the equipment manufacturer. The usage rates for other plant consumables also need to factored into the model and estimates can be provided by vendors and O&M firms. If the developer has trouble getting ballpark estimates, then an engineering consultant may be needed at this point.

By the time a developer has gotten this far into a potential project, there should be a fairly good feel for the power pricing parameters, as well as the projected annual operating hours of plant operations. Normally at this point, power pricing is still being negotiated, so a high, low and base case scenario should be run on the model.

After building a preliminary financial model the developer can now look at the returns of the project. For simple first cut analysis, it is best to leave out debt, inflation, escalation rates (unless already agreed to), and taxes, since these factors are relatively unknown. If the developer has done enough research to determine that projects similar to it’s own (in terms of size technology and location) have secured debt financing, then it can go ahead and plug in the debt terms of such existing projects if they are available.

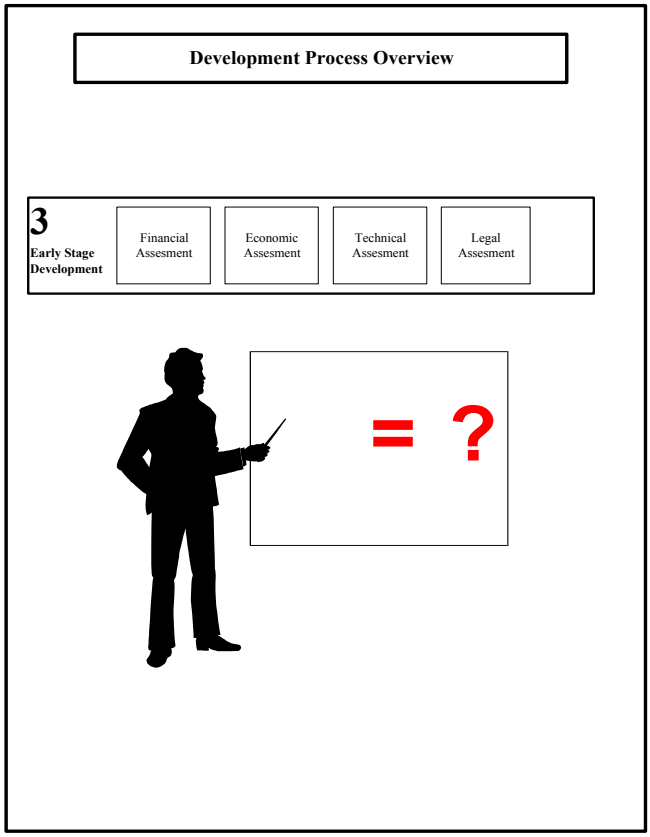
Many developers mistakenly assume debt financing is available for their project when it is not. It is therefore reiterated that projects should be evaluated on an all-equity basis.

For most developing countries, base case equity IRRs need to be in the 20 to 30 percent range, and if debt is available at all, first year and average debt coverage ratios should be around 2 X.

As an example of financial decision-making, suppose the base-case scenario shows an 18 percent IRR and debt coverage of 1.1 in the first year. In this case, the project should be considered extremely borderline. On the other hand, an unleveraged equity IRR of 25 percent should generate investor interest for a well structured project located in a country that is not considered too risky.

Taxes can be a very complicated issue in many developing countries, and in fact, are often negotiable, so unless the developer has highly qualified advice in this area it is best to leave taxes out of the model with a clearly marked caveat to that affect. If projected returns are within an acceptable range and the developer has addressed all the other issues in this section, it is warranted to move on to actual development activities.

SECTION 3. EARLY STAGE DEVELOPMENT TASKS



Joint Venture vs. Foreign Owned Project

Once a developer begins actual development of a foreign project in earnest, one of the first decisions that need to be made is whether to pursue a Joint Venture (JV) or a 100 percent foreign owned project. This issue must be resolved early on because it will determine the parties and relationships that will govern development activities thereafter.

The advantage of a JV is that in additional to being generally encouraged by governments, the developer will have a local partner looking out for the interest of the project. The JV partner can assist in fighting local battles and help resolves problems as they come up with various government agencies. The JV partner, in particular, may be indispensable in getting the project through all the permitting and approval processes. Beyond expediting government related matters, a JV partner may be in a position to secure advantageous terms on the PPA, taxes, land use, water rights, local workers unions, etc.

The disadvantages of a JV is that if disputes arise between the foreign and local partners the foreign partner may be left out in the cold, not withstanding contractual agreements and arbitration clauses. If the dispute goes to a local court, the developer runs more than a high risk of loss. This risk underlines the importance of choosing the right partners to start with and placing a premium on maintaining diplomatic relations.

An additional problem also arises when the JV partner is also the power buyer, in which case a conflict of interest may exist. The partner, as part of the development group, should be motivated to maximize the profits of the project, while as a buyer of power it is motivated to win the best purchase terms from the project.

Potential disputes with JV partners can be avoided by pursuing a 100 percent foreign owned structure, but all the advantages are lost as well. In some countries developers

are compelled to go this route because reliable local partners are either simply not available or are considered high risk parties. One of the risks associated with local parties is that unless they are unusually powerful, they are often stuck in the middle of their own turf wars and are constantly falling in and out of political favor.

If a developer is associated with a previously well-placed partner that subsequently experiences a downslide in influence, then the fortunes of the project will wane. While a 100 percent foreign-owned structure can eliminate many of these risks, the developer can count on increased time-frames and more difficult negotiations dealing with government agencies.

Most developing countries encourage (or even require) some form of equity or contractual JV. There are both advantages and disadvantages to JVs compared to 100 percent foreign-owned projects.

In summary, the decision to go JV or 100 percent foreign owned must be done on a case-by-case basis with careful consideration given to all factors. Looking to the experiences of other developers in the same region is a prudent strategy.

Research of Government Regulations

It is important for the developer to do in-depth research on all government regulations, incentives and restrictions. Developers often assume their local partners will assume this task and do a proper job. Such assumptions should not be made. The array of overlapping and conflicting laws in developing countries at the local, provincial, and national levels provide a daunting challenge for those seeking to understand them.

The laws and regulations applicable to power projects are one thing, and their application in practice may be quite another. For example, developers in China routinely divide projects into phases so as to avoid State Planning Commission jurisdiction.

Rules may be applied stringently or in a lax manner, depending on who the local party is. Such gray areas provide no comfort to equity and debt providers so the developer is advised to employ legal counsel, and to try to get some kind of prior ruling from government authorities over questionable areas of law.

In many developing countries, where the legal system is chaotic or embryonic, local project partners believe that their political power will carry the project and override regulations. The developer must be wary of being seduced by such an approach - it will not fly with banks or equity investors.

Negotiating Preliminary Agreements

Understanding the above-mentioned laws is pertinent since it will undoubtedly affect the structure and terms of the developer's agreements with the JV partner. Most

agreements with the JV partner will go through several iterations, but preliminary agreements must at least establish the ground work upon which further refinements are based.

The basic issues such an agreement should cover are:

1) The structure of the joint venture: Joint ventures can be structured any number of ways, with contractual joint ventures being the most flexible. Contractual Joint Ventures normally do not spell out specific ownership percentages of the project. In Equity Joint Ventures, the parties reach an agreement as to the percentage split in ownership such as 70 percent foreign, 30 percent local, 80 – 20 percent, or 51 - 49 split, etc. Whenever possible, it is best if the developer can maintain either a majority position, or have a built-in mechanism for management control if they are taking a minority stake.

2) Defining the responsibilities of each party: The joint venture agreement needs to clearly define the responsibilities of each party in the development process. Most often the local party agrees to assume the primary responsibility of securing government approvals, land acquisition, water rights and other local tasks. The foreign party is most often responsible for securing finance. Even if both parties will be making equity contributions, the local party's contribution may be in-kind and disproportionate to its percent of ownership.

   In most cases, the foreign developer is required to secure the bulk of equity and debt finance. Tasks such as fuel supply contracts, feasibility studies, engineering, and vendor and contractor selection can be done collectively or assigned to the most appropriate party. Normally, both parties are intimately involved in negotiating the PPA. The agreement should also spell out the consequences of either party failing to perform their respective duties.

3) Profit splits: Under a contractual JV there may be profit splits, or the local party may simply be paid a fee for its services. Under an equity JV, there is normally some kind of profit splitting. For an equity JV, profit splits do not necessarily parallel ownership percentages, and profit splits may be timed (accelerated) to satisfy the needs of foreign equity investors.

   For example, if a JV is 70 percent foreign, 30 percent local: in order to raise the necessary equity, investors may require the foreign side to get 80 percent of the profit for the first five years to reach their IRR goals. In this case, a trade-off may occur whereby in the following five years the local partner may get 40 percent of the profit. There are no set formulas for these percentages, and the partners will need to give and take until a financially feasible profit split percentage structure is determined.

Technological Feasibility

A developer will have made a number of assumptions concerning the project's feasibility and equipment configuration in order to generate its preliminary financial model. Once the decision has been made to proceed with the project, technical feasibility studies need to be undertaken. Sometimes the local partner will have already done their own domestic version of these studies. Whether or not they have done so, the developer will need to employ the services of an engineer or qualified consultant.

The original plant configuration used in preliminary modeling may have been generic for estimation purposes. Moving forward, the developer will need to address site specific issues related to design and equipment selection. Ambient air temperature, humidity, geology, geographic features, fuel delivery systems, site access, hydrological, wind, and solar resources (if applicable), transmission and substation requirements, delivery voltages, current and hertz requirements etc., all need to be taken into consideration.

The list covering the subject is beyond the scope of this Handbook other than to point out the importance of conducting such studies early on. If the developer is not fully aware of what is required in technological feasibility studies, then they are advised to hire an expert.

Preliminary Contract Negotiations

By now, the developer should have enough information to begin preliminary contract negotiations in an informed manner. The Power Purchase Agreement is the life-blood of the project as well as the cornerstone of the developer's ability to raise development capital. The importance of securing of at least a preliminary version of the PPA cannot be overstated. Fuel supply and land use agreements, while important, are relatively mundane compared to the PPA. The key terms of the PPA are the power price and the term of the agreement.

> Without a good, solid letter of intent, or a preliminary PPA, it is just about impossible to go further in development without serious risk of wasting money.

As with all negotiations, those of a PPA are an art, and the nuances of negotiating strategy will vary wide among developing countries. If the developer has conducted sufficient research, then they should already have a fairly clear picture of the range of power pricing the buyer expects. In some cases, prevailing market rates may provide a good indicator. If market rates are well above what is needed to provide adequate returns to investors, the developer should not attempt to push the power price much above those rates or it will be dismissed out of hand.

If a project can still yield good returns at slightly below market rates, the developer may consider offering a slightly reduced price if such a move buys goodwill and the opportunity to secure other advantageous non-price related concessions in the PPA.

Conversely, utility rates in many developing countries are well below the cost of producing power, much less providing adequate returns on invested capital. This is essentially subsidized power. In such cases the developer often faces an uphill battle and will spend much time educating the utility. Eventually these utilities must recognize that creating new capacity where domestic capital is in short supply; they must meet the terms required of developers to get privately financed power.

In areas where the lack of power is a brake on economic growth, political/economic pressure eventually forces the utility to face the realities of international project finance.

In addition to pricing of energy and capacity payments, the developer needs to address numerous additional elements in the PPA, including hours of planned operation, transmission and substation issues, performance penalties and bonuses for performance, metering, payment schedule, escalation, inflation pass through, etc.

Perhaps the most important concession a developer should seek if the PPA is not priced in hard currency (which is often the case), is linking the domestic currency price to the exchange rate through a formula that protects investors' IRRs from shifts in currency value. Without such a mechanism in place, the developer will be hard-pressed to find finance unless they can find investors willing to take the currency risk, or investors that already have significant holdings and operating expenses in the local currency.

Recent foreign exchange rate volatility in Southeast Asia has caused special attention to be focused on foreign exchange matters. Brazil, a top energy project market, has been seen as possibly vulnerable to devaluation.

If possible, the fuel supply arrangements should be done on a competitive basis. Often this is not possible where a state-run or a natural monopoly exists, or in a situation where a single gas pipeline or local coal mine are the only options.

If fuel must be imported, the developer will need to carefully check laws protecting local distributors and import restrictions or tariffs. Long term contracts should be pursued and increases in fuel costs should have built in pass-through in the PPA. Biomass projects will need back up or alternative fuel supplies; hydro projects will need to secure water rights and discharge terms with the proper authorities. For thermal plants, water supply agreements also need to be taken into consideration, particularly for heavy users such as coal fired plants.

This necessity of securing land use and access agreements do not need much elaboration. Land use includes not only the plant site but associated land uses such as ash disposal sites.

For larger hydro projects the developer may also need to negotiate compensation to displaced farmers and riverside villagers although this is a task customarily reserved for government agencies. When negotiating land use rights the developer needs to be keenly aware of incentives such as economic development and industrial zones, as well as tax implications.

Developing Cost Estimates

Once the developer has conducted its technical feasibility study, concluded preliminary agreements with JV partners, as well as PPA, supply and land use, they must use those elements as the base for refining all project cost estimates. While the initial project model may have used “ball-park” estimates to determine whether or not the project was worth pursuing, the developer must now start refining the data and acquiring the best available data.

Beyond establishing realistic developments costs (including the cost of engineering, legal and financial services) the developer will need to begin direct discussion with potential vendors, EPC firms, O&M firms, and insurance companies. To do so, it may be necessary to hire consultants who have a thorough knowledge of the cost structure of these factors in the country where the project is located.

Once again, looking to the costs of similar projects can act as a guide if such detailed information is available. In refining costs, the best policy is to error on the side of conservatism: over- estimating instead of underestimating. Underestimating costs in an effort to make a project look more profitable, will come back and haunt the developer in the face of financial due diligence by banks and equity investors.

Developing a Specific Financial Model

Using the now-refined estimates of all project related costs, the developer is in a position to flesh out its preliminary model and work towards a greater degree of thoroughness and accuracy. If in-house expertise is not available, consultants will need to be hired. It is critical to build in all foreseen elements affecting the economics of the project and clearly identify all assumptions.

The model should be set up to easily change variables for running various scenarios and sensitivity analyses. Taxes and provisions for debt should now be built into the model. After running all equity scenarios, additional scenarios may incorporate senior debt, subordinated debt, vendor debt, export credit agency finance, lease financing etc.

If the developer does not know the kind of debt available, they can plug in conservative numbers for a simple debt financing analysis, such as 12 percent interest over an eight-year term on a 30 percent equity and 70 percent debt structure.

The aim of the model is to yield an accurate estimate of the IRR for investors and debt coverage for lenders. It helps the developer determine how much profit they can get from development fees and carried equity, before cash flows available to providers of capital fall below what they will require. The model can also be used as a project analysis tool in further negotiations with the JV partner and the power buyer.

Application for Preliminary Approvals

By now, the analysis done by the developer and JV partner should provide a good indication of whether a workable deal is in the making. If it is, they will also have a good understanding of the approval process and should be taking the necessary steps to secure official recognition of the project.

In some developing countries, the first step is not a preliminary application for approval of the project itself, but rather an application to proceed with development of a project and approval of the Joint Venture arrangements. In the early stages, more than one foreign development group may be taking steps to develop the same project, with government agencies playing one off against the other with out the knowledge of either. Whether such a situation exists, a prudent developer will seek official recognition for the project at the earliest opportunity. Even an official recognition can be misleading because it is not always clear who has the authority to commit the utility or allow a concession or license.

Many approval processes can take months or even years to complete, and typically there are numerous approvals required, such as environmental, transmission tie-in, Joint Venture, business license, feasibility, PPA, foreign exchange, and equipment importation approvals. There can be many more. It is incumbent upon the developer to understand and initiate the process as early as warranted by official regulations.

Writing Brief Project Profile

Once the developer addresses early stage development tasks outlined in this section, they should have the necessary information to write a project briefing for introducing the project to prospective participants. Performing the tasks outlined above is necessary to produce a meaningful briefing. If the developer fails to address many of these issues, a prematurely written briefing will raise more questions than answers. Also, introducing a meaningful briefing establishes good credibility. Finally, prospective partners are usually willing to spend some time educating the proposer, but if it goes on too long, the goodwill needed to get partners and money will have been spent on learning.

The purpose of the briefing is to introduce potential participants to the project and convince them that the developer has competently addressed the major issues. It is not

meant to serve as a detailed account of a project which is still under development. The length need not be more than two pages.

The briefing should include:

1) Project location and name.

2) Project size and basic configuration.

3) Who the development group is, and percentage of project ownership within the group.

4) Identify the parties buying the power.

5) Basic information about the PPA.

6) Basic information about the fuel supply agreement, including price and BTU content, or solar, hydro, wind parameters.

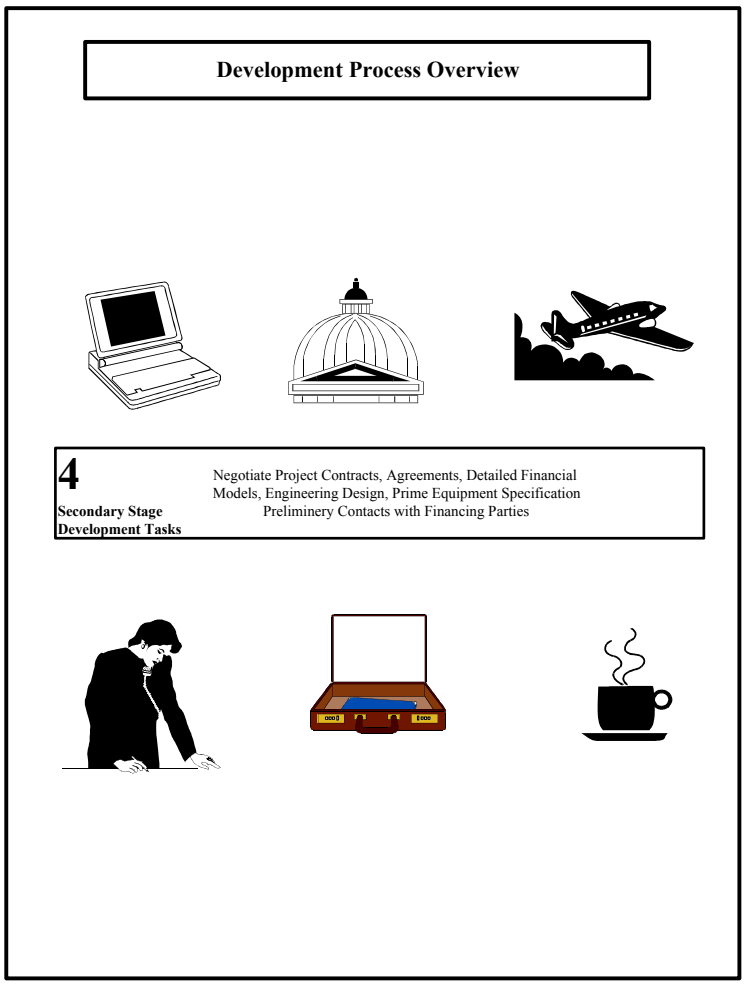
7) List of government agencies involved and approvals that have been secured.

8) Basic information about overall project costs, finance structure, and returns to investors.

9) Developer contact information.

SECTION 4. SECONDARY STAGE DEVELOPMENT TASKS

The early stage development tasks have served to define the broad outlines of the project, establish preliminary agreements, begin the government approval process, ascertain technical feasibility and generate a “first-cut” financial model. In second-stage tasks, the developer must complete the process of moving toward concrete levels of details and finalization of all agreements and EPC related contracts.



Developer’s Financing Ability

Up to this point the developer has probably been able to accomplish much of the development work either in-house or with a minimum number of hired consultants. Moving into the more serious secondary stages, significant costs will necessarily be incurred, and the developer must make an honest appraisal of the ability to fund these activities with its own resources.

While development costs vary by a wide range depending on the specifics of each project, a medium-sized project (less than 100 MW) with a budget of $500,000 would be entirely reasonable. Unfortunately for smaller and medium size projects, development costs are not proportionate to the size for the project; i.e., a 12 MW project may just as well incur development costs equal to those of a 50 MW project. Legal costs in particular are not related to project size.

If, in the developer's best estimation, further development costs cannot be covered in-house, then steps must be taken to raise development capital.

Selecting Appropriate Partners

Once the developer has decided to raise development capital, it is faced with two choices: 1) either raise the funds directly from speculative investors, or 2) take on additional partners who will contribute the necessary resources. As with the original choice of local JV partners, the choice of new development group partners is critical. Equity investors and banks will scrutinize the qualifications of all project participants and new partners should serve to enhance the development team.

If the developer decides to raise development capital directly from investors or development assistance agencies, it still may be required to take on high profile partners in order to raise the overall qualifications of the development team. There are several sources of "passive" development capital available which can be located using industry directories and trade journals. The term "passive" refers to the level of management involvement in decision-making during the development and operation phase. Passive investors seek lower risk profiles than do "active" investors.

In approaching these firms, the developer is advised to hire a consultant who is familiar with both the process of raising capital and the characteristics of specific investment firms.

The choice of qualified partners covers a wide range and is determined by the project's attractiveness, location and technology. Such potential partners include EPC firms, equipment vendors, O&M firms, and other more qualified experienced developers with substantial balance sheets. In all cases, the developer must be willing to carve out a sufficient portion of the upside financial benefits to attract new partners.

To join with a larger developer, the original developer will likely have to give up a major portion of their interest in the project. It is surprising how many developers fail to recognize the necessity of taking this step, or hold out too long for the best possible terms.

While many developers deplore giving up control of the project to other developers (or investors), they must recognize that without doing so the project may die due to lack of resources.

An excessive profit expectation on the part of the original developer has ended many good projects. Unless the developer already has numerous successful projects and substantial funding resources, it is better off making concessions to see the project completed. It is better to have a small piece of a successful project than a controlling interest in a dead project.

Confidentiality Agreements

Depending on the developer's certainty over control of the project and relationship with the local partner, it should give serious consideration to the use of confidentiality agreements when approaching all potential participants. In developing countries, developers cannot count on government agencies or local partners to honor agreements.

Large developers sometimes pursue the projects of small developers. Even large publicly-held U.S.-based developers have been known to try and pry projects from fellow developers. A confidentiality and non-circumvention agreement does not provide ironclad protection against unethical behavior, but it is better than nothing and will provide a path for recourse.

The tension in implementing these agreements is that the offering company wants to disclose as few details as possible and keep options open while learning what the buying side will offer. The buying side wants to look first without commitment, understand the project, and then negotiate a deal. Buying companies also do not want to commit themselves to working with one sponsor if that same project with another sponsor may be available later.

One problem with attaining an executed confidentiality and non-circumvention agreement is that the parties signing them usually want at least some basic information about the project before signing any agreements. In order to satisfy this need, the developer can take the project briefing and remove the specific names which would allow identification of the specific project, thus creating a "blind profile." Whether or not the developer decides to use a confidentiality and non-circumvention agreement, they should proceed with caution in any case.

Once the developer is comfortable with disclosing detailed information with potential project participants, it may begin negotiating the terms of their involvement with the project. Unless the developer is selling a majority interest in the project, it must maintain a position of control. Before making a deal with any single new participant, the developer must consider the possibility that other participants may be taken on at later dates, and should negotiate terms that leave this option open while maintaining control of the project.

The developer should structure an agreement that includes terms protecting against a new partner not delivering its end of the bargain. Once the developer is locked into partners, mitigating or ejecting them from the project can be an impossible, or at best, nasty business.

Choose partners and negotiate terms of participation wisely. If a developer does not have experience in this area, they should hire a qualified advisor, consultant and legal counsel.

Detailed Engineering and Technical Feasibility

The technical feasibility and engineering discussions have been kept basic to this point for the purposes of deciding whether to pursue the project and for gross cost estimation in the financial model. The issues of design and engineering feasibility must proceed to a more serious and detailed level of consideration.

The more thorough the engineers' knowledge of local construction practices and building and operating a power plant in the country, the less chance there will be unexpected surprises down the line. Even basic questions regarding equipment delivery are sometimes overlooked with disastrous results. Among other things, engineering activities need to provide specifications that can be put out for bid to vendors, construction companies, or EPC contractors, some of whom may have joined the developer as partners.

If any of these parties have joined the development team, an independent evaluation of the appropriateness and pricing of their respective goods and services must be conducted. Ideally, project engineers will not be married to any particular vendors, suppliers, or technologies, and are free to design optimal plant configuration and equipment selection.

It is a good idea to seek the opinions of qualified O&M firms (or consultants) that have project experience and capabilities in the country (and perhaps the region) where the project is located. The firm can give valuable advice related to plant design and provide a starting point for the selection of a qualified O&M firm as the actual plant operator.

As the project moves through the advanced stages of engineering, adhering to environmental compliance is a necessity. Thorough communication with the proper government authorities and knowledge of regulations is critical. The environmental permitting process must be diligently addressed, and if finance is being sought from institutions having their own environmental standards, these standards must be incorporated into the plant design.

Often the environmental standards of international finance institutions exceed those of the host country. The use of best available technology is advised over the lower-cost but unfinanceable systems. Keeping in mind the requirements of finance, the developer needs to work with established engineers and companies that investors and banks will accept.

Refining the Financial Model

The financial model should reflect the more detailed information gleaned from further research in engineering, operating parameters, and the PPA. The developer should constantly be seeking and updating the data in the model including insurance, legal, finance, working capital, spare parts, fuel and initial fuel supply reserves, start up and run in costs, transmission and grid connection charges, taxes, import duties, and contingency costs.

The model no longer serves just as a tool for the developer, but will be closely scrutinized by increasing numbers of parties who will demand higher and higher standards of thoroughness and accuracy. If the development team does not have an in-house project finance expert, or has not employed the services of one, now is the time to do so.

In translating the engineering inputs into the model it is a good idea to use the categories and formats used by engineers directly in the financial model. One way is to have an interim model that feeds the financial model. Then, any conversions and manipulations to the data can be shown, and any changes to engineering assumptions can be easily implemented later.

Finalizing Project Agreements

Since entering into initial preliminary agreements, the developer should by this time be negotiating several iterations of these agreements as better data becomes available and the parties to the agreements begin to understand the limits and constraints.

In all cases, the services of legal counsel familiar with both local and international business law is probably now required. Even though the project arrangements may seem straight-forward and sensible, the services of qualified legal counsel is necessary to insure that the agreements are legal in the country where the project is located, and that the wording is acceptable to investors and lenders. Local partners may be unaware of their own laws and their opinions should not be relied upon for compliance of agreements and contracts with local, provincial, state, and national laws.

Finalizing Government Approvals

As with agreements and contracts with other project participants, the development group needs to be constantly moving the project through all the necessary government

channels for approval. There can be dozens of such approval requirements covering the project itself, the Joint Venture, the PPA, transmission access, site use, environmental permitting, currency conversion, government backed guarantees, access easements, water rights, worker housing, business licenses, clarification of tax matters, BOT and BOOT agreements.

If the developer anticipates the need to sell its interest in the project, it needs to make sure these agreements are assignable and transferable. The bulk of these approvals need to be in place before lenders and investors will start formal due diligence. In many cases, government agencies will not issue final approval of a project until specific commitments are secured from specific financing parties. In these situations, the developer must be able to demonstrate to financial institutions that the project will be approved pending financing.

If all approvals are not in place, the developer must establish a realistic schedule for gaining approvals, and consider the time-frame experienced by other developers rather than relying on the stated government policy. The developer must also be keenly aware of milestone dates embedded in any approvals, and cannot assume that approvals will be automatically extended as long a progress is being made. The developer may be given a window of time to develop and finance the project, after which it runs the risk of not gaining an extension, or the possibility that the government will assign the rights to a competing developer.

When approaching all potential participants one of the first concerns raised by such parties is related to the project's approval status. Developers are advised to be constantly pushing for clarification and progress with government agencies on these matters.

Selecting and Negotiating Contracts

Before potential financing sources will take a project seriously, they will require that all the required contracts for engineering construction, operation and insurance are either in place, or are pending final agreement prior to financial closing. In the process of contracting with firms providing these services, the developer must avoid the temptation to simply pursue the lowest cost alternative. The most important factor is to engage the services of firms that are "bankable."

In the broadest sense, this means firms that have an established, recognizable track record and solid balance sheets to back up performance of all aspects of the contracted work or service. For EPC contractors this means they must have the experience and financial wherewithal to perform the contract as well as cover damages resulting from failure to perform. Equipment manufacturers must be able to provide systems that are

generally accepted by the industry and be able to back up guarantees on equipment performance. O&M firms should enjoy an established reputation, and have experience related with the project's plant configuration in the target location. Insurance companies must be well-rated.

Once qualified companies have been identified, the developer must draft specifications or criteria for the contract services to be able to compare competing bids properly. Beyond considering prices of bids, the developer also must examine the payment terms of the contracts (including offers of finance) and whether potential qualified providers of services or equipment are willing to provide development capital in order to secure project contracts.

EPC firms and equipment vendors may be willing to provide either up-front services or limited amounts of development for promising projects that meet their objectives. Often though, if the developer agrees to accept such support, they may be locked into paying higher prices in the end. Thus, short-term and long-term benefits must be carefully weighed. Developers must be careful not to get locked into technologies or equipment which may subsequently prove to be inappropriate.

Exploring Credit Enhancements

"Credit enhancements" should be explored by the developer to support the basic project contracts. Credit enhancements mean that a third party provides a guarantee, such as a government providing a guarantee that a state-owned utility will honor its power purchase obligations. Another example would be the U.S. Export-Import (Ex-Im) Bank providing political risk insurance for a lender financing a project abroad that uses U.S. equipment. Often, qualified EPC firms and vendors can assist the developer in applying for and arranging such financial support for various elements of the project.

Most commonly, these firms have ties to export credit agencies of their respective domicile, and are adept at taking advantage of such support when a project meets the established criteria. In general, European and Japanese export credit agencies are more aggressive than the U.S. Ex-Im Bank. The process of securing such financing and guarantees can be cumbersome and time-consuming. Often developers of smaller projects have found that the effort and expense outweigh the benefits, particularly where steep up-front application fees are required.

Multilateral institutional support is most commonly found in government-to-government arrangements with the project host country having authority over the disbursement of funds, such as under World Bank programs. Projects that have access to these funds are subject to very strict and transparent open bidding rules, requiring developers to have deep pockets and extensive proven track records.

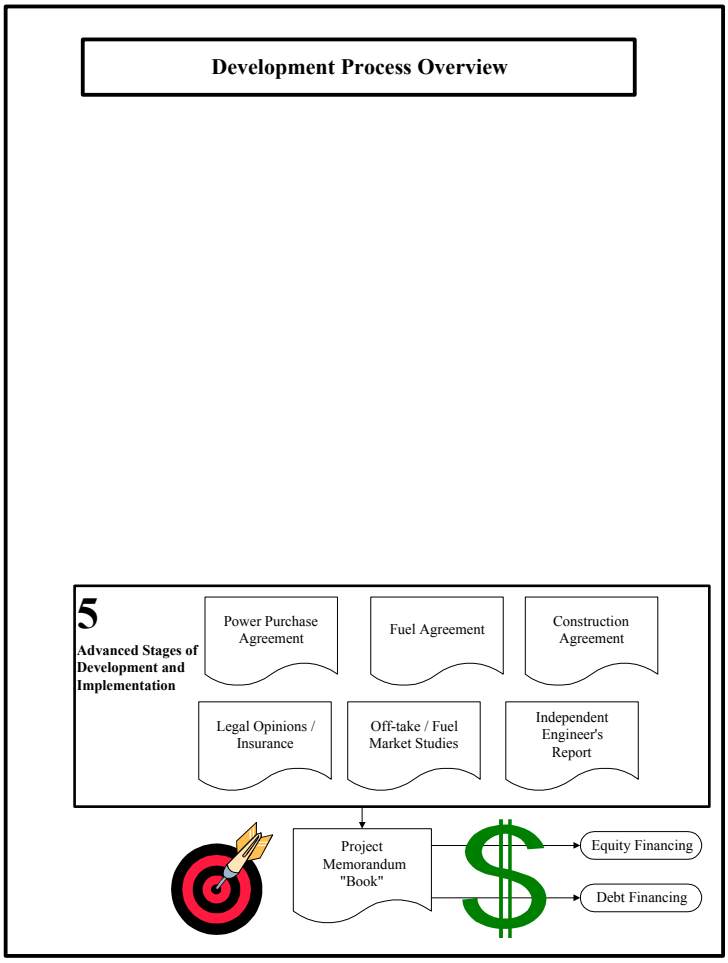
Various forms of political risk insurance and debt default surety bonding is available for foreign projects. The premiums for such insurance are a direct function of the risk assumed by the insurer. In many cases the developer has no choice, as financial institutions may require a political insurance risk policy be to underwritten for projects.

Privately provided debt surety or debt repayment guarantees are beginning to emerge, generally underwritten by insurance companies. The premiums for such insurance typically run up to five percent of the amount guaranteed, and in effect provide a credit rating to the project equivalent to the rating of the insurer. While the added expense of such insurance may be viewed as high, the cost is well-justified if securing such a policy allows the developer to finance a project that cannot be financed otherwise.

Ideally, a developer should attempt to secure whatever guarantees may be available from government or quasi-government institutions in the project's host country. Such guarantees may be directly offered by the government or central bank, or by government-owned commercial banks such as the Bank of China, or by the power purchasing utility. The developer must be aware that such guarantees are only as good as the creditworthiness of the institution providing the guarantee.

In many developing countries, regional utility guarantees are almost meaningless since the utilities themselves may be in poor financial shape. Where a central bank or government-owned bank is providing the guarantee, the project risk becomes equal to that of the sovereign risk rating of the country. The developer must also be wary of situations in which guarantees are provided by branch offices of government owned banks that may not have the approval of the head office.

SECTION 5. ADVANCED STAGES OF DEVELOPMENT: FINANCING AND IMPLEMENTATION



In this stage, the developer is approaching the “finish line” of financial closing, which is usually also the start of construction. All key project contracts and approvals are well on their way to being finalized and documented for the purposes of securing debt and equity finance. At this stage, significant sums of development capital have been expended, and major commitments have been made by many parties.

Finalizing Project Agreements and Approvals

In the final stages of development, the developer no longer has the luxury of negotiating project contracts and approvals in their preliminary form. It is essential that these documents and approvals be pushed to completion, and the utilization of qualified legal counsel is mandatory.

Major financial institutions are familiar with these contingencies and are capable of moving forward under the circumstances if pending approvals are well documented. In addition to gaining specific approvals, the developer is advised to have qualified legal counsel review the entire range of relevant government regulations to make sure that absolutely no licenses or approvals have been overlooked.

In several developing countries, final approval is not granted until financing is secured, in which case project documentation needs to clearly reflect this fact.

Often, government agencies are not coordinating among themselves and the necessity of a minor (but still required) approval may fall between the cracks. Obscure government departments can become a major thorn in the side of the developer if they are neglected.

Writing the Project Memorandum

During the final stages of development, the developer should have all the required information to write a Project Memorandum that serves as a comprehensive introduction of the Project to potential providers of equity and debt financing. No effort should be spared in including all relevant project information and contracts, as well as an accurate and complete description of the qualifications of all project participants.

For a good project, a poorly written information memorandum can inhibit a transaction with potential investors. If the Book raises more questions than it answers, it will be failing the function for which it was designed. If the developer is not capable of writing a high quality document, it is advised to hire a firm to do this.

A well-written Project Financing Memorandum provides answers to key questions and gives the reader confidence that the developers has thought of every risk angle within a defined genre. The checklist provided in Section 1 may used as a guide for the content areas in the Project Financing Memorandum.

Soliciting Debt and Equity Finance

Once a well written Project Information Memorandum has been completed and all other development tasks have been finalized, the developers is ready to approach equity investors and provider of debt finance. It is not the intention of this Handbook to identify specific parties providing finance, as they are constantly changing; however, there are several excellent directories published that address this purpose.

Sources of finance can be broken down into a few basic categories:

1) Selling the project to larger developers who have established financial means.

2) Passive equity from specialized investment funds including private placement facilities. Future sources of financing may include funds raised to finance a portfolio of projects bundled together for diversification lower transactions costs.

3) Investment banking sourced debt and equity, including bond offerings.

4) Institutional funds such as insurance companies and pension funds.

5) Commercial Banking debt sources, syndicated loans.

6) Multilateral institutions and Export Credit Agencies (ECAs)

7) Initial Public Offerings.

If the developer is not versed in the nuances in selecting and approaching these entities it is advised to hire a qualified financial consultant to do this. At a minimum, the developer needs to research which parties are actively financing projects in the host country and their investment criteria. If possible, information about qualified sources of funding should be gathered and used to tailor correspondences to generate maximum initial interest.

As a matter of prudence, confidentiality and non-circumvention agreements should be signed before the developer releases the Project Information Memorandum to any parties. If needed, a short (2-page) project briefing should be available to be sent without a confidentiality and non-circumvention agreement, in order to spark initial interest.

Due Diligence

Once the interest of qualified financing sources is generated, the more serious of these parties will begin the process of due diligence. This process typically takes much longer than expected and can easily run over six months or even a year. The more thoroughly the developer has addressed and documented all the development tasks, the quicker the financing sources will be able to analyze the project. Numerous trips and meetings with the funding party can be counted on, as well as site visits, interviews with various project participants, credit checks, and the review of audited financial statements.

If bond financing is being pursued, the underwriter may ask the developer to pay the costs of having a rating agency rate the project, a cost of roughly $100,000.

Due diligence, even of the best power projects, is rarely a straight forward exercise. Commonly, financing sources will find flaws that they ask the developer to remedy before further investigation is pursued. Rather than fixing problems one at a time, the developer should seek to have the funding source identify all its major concerns from the outset, so that they has some idea of what is expected and to permit scheduling and budgeting for activities related to “fixing” the problems.

It also must be recognized that certain problems posed by specific funding sources may not be overcome, in which case the developer should drop efforts with those sources and concentrate on sources of finance that find the project more acceptable in general terms. During the due diligence process, ongoing advice of qualified financial and legal advisors is recommended, if not required.

Negotiating Finance Terms

When potential funding parties have reached an advanced (but not necessarily complete) level of due diligence, they will present the developer with proposed transaction terms, or a “term sheet.”

Before beginning the process of raising finance, research should have already given the developer a fairly accurate picture of what the financial markets, or other developers expect in terms of IRRs, or debt rates and maturities, for comparable projects located in host country. This information enables an informed analysis of the term sheets being offered and will allow the developer to compare competing offers. As a minimum tool of analysis, the terms must be run back through the project financial model to yield the returns to the developer itself.

The developer is advised to take reasonable offers by qualified parties seriously and to limit playing one off against another.

A common problem with many small developers is excessive profit expectations. Rather than accepting reasonable offers, developers often hold out for a better deal with unrealistic expectations. Financing sources do not want to be competing for a deal unless it is of extremely high quality. Funding parties may simply withdraw offers altogether if they perceive the developer is unrealistic, and they may delay or vitiate viable offers of finance.

Once the financing source drafts term sheets, negotiations may take place within a fairly narrow range of parameters. The developer should not get stuck on minor issues, and instead needs to focus on reaching compromises which allow a transaction to be consummated. The services of financial and legal advisers are essential in all negotiations at this point.

Legal Documentation

The developer needs to secure high quality documentation of all project agreements, and the financing sources will require extensive documentation of the financial transaction. The parties need to come to clear agreement over who is responsible for bearing legal costs.

Legal costs may run anywhere from $100,000 to several million dollars for projects in the range of a few megawatts up to 100 MW. They are expensive because the contracts may be forging new legal ground in areas we take for granted, such as property rights. An additional cost related to legal documentation is that all documents may be required to be translated into the language of the host country at approximately $25 to $50 a page.

Legal costs are high when it is desired to have parties consider various scenarios for the future and to set forth in clear language the rights and obligations of each party in these cases. There is no right or wrong for how much to spend. Rather it is a difficult judgment call to decide what is critical, what can be left loosely specified, and what may come back to haunt one or more parties later.

Financial Closing

Once all projects agreement, approvals, legal documentation and negotiations with financing parties have been accomplished, all that remains is financial closing. As the project approaches financial closing, the attorneys tend to take over the process. If substantive issues arise, the project may need to be reconfigured. In practical terms, the developer should not consider the financial closing done until funds are deployed.

Project Construction

It is beyond the scope of this Handbook to detail the project construction. This task is left to the EPC contractor and equipment suppliers, with the developer having completed the most difficult tasks already. Prudent developers will have their own engineering representatives keeping tabs on the construction process to make sure that the construction contract is being performed as agreed.

Construction financing proceeds in stages and the lenders' engineer will need to sign off each time additional funds are released. Generally a contingency fund is required and the project owners must thoroughly consider any change orders or cost overruns for which they will be held financially responsible.

Construction of power plants can take anywhere from six months to several years depending on the plant configuration, technology, and location. Transmission interconnection and delivery of fuel supplies need to be ready by the time the plant is complete, items which are not usually the responsibility of the EPC contractor.

Startup and Testing

If the developer has signed a turnkey contract, the EPC firm will usually have performed an initial start-up and plant testing before the contract is considered performed. Once plant performance has been demonstrated to meet agreed upon specifications and accepted by the developer, an O&M firm takes over plant operations (unless the developer is also acting as its own operator).

Normally the O&M firm and EPC contractor will work side by side during a transition period to facilitate testing and a smooth transfer of operations. Ideally, during the run-in period, power is sold to the buyer under terms specified under the PPA. If the project is selling to the utility synchronization with the grids will require a coordinated effort between the plant operators and the utility's engineers. Once startup, testing and owners' acceptance of the plant is accomplished, the development phase is over and the project moves into the operation period.

APPENDICES

Trade Publications

Country Regional Trade Publications

Central European Business	Nestor House Playhouse Yard London, EC4V 5EX	44-171-779-8888
Derivatives Week	Institutional Investor 488 Madison Ave. New York, NY 10022	212-224-3570 Tel 212-224-3233 Fax
Emerging Markets Investor	Risk Publications Monadnock Bldg. 53 West Jackson Blvd., #556 Chicago, IL 60604	312-554-0556 Tel 312-554-0558 Fax
Emerging Markets Week	Institutional Investor 488 Madison Ave. New York, NY 10022	212-224-3800 Tel
Euromoney Publications PLC	Nestor House, Playhouse Yard London, EC4V 5EX	44-171-779-8888
Foreign Exchange Letter	Institutional Investor 488 Madison Ave. New York, NY 10022	212-224-3233 Tel 212-224-3353 Fax
Global Finance	PARS Int'l Corp. 114 E. 32nd St., #503 New York, NY 10016	212-779-4469 Tel 212-779-4277 Fax

Latin Finance	LatinFinance Ltd. 2121 Ponce de Leon Blvd., #1010 Coral Gables, FL 33134	305-444-7646 Tel 305-445-1895 Fax
Private Asset Management	Institutional Investor 488 Madison Ave. New York, NY 10022	212-224-3233 Tel 212-224-3353 Fax
Project & Trade Finance	Nestor House, Playhouse Yard London, EC4V 5EX	44-171-779-8698
Project Finance In Latin America	LatinFinance Ltd. 2121 Ponce de Leon Blvd., #1010 Coral Gables, FL 33134	305-444-7646 Tel 305-445-1895 Fax
Project Finance Monthly	Information Forecast 13715 Burbank Blvd. Sherman Oaks, CA 91401	818-902-5400 x31
Standard & Poor's CreditWeek	Standard and Poor's 25 Broadway New York, NY 10004	212-208-1146 Tel

Energy Related Trade Publications

Clean Energy Finance	Winrock International 1611 North Kent St., #600 Arlington, VA 22209-2134	703-525-9430 Tel 703-243-1175 Fax
Electrical World	McGraw Hill 11 West 19th St. New York, NY 10001	212-627-3811 Fax
Global Private Power	Financial Times 149 Tottenham Court Road London W1P 9LL, UK	44-171-896-2251 Tel 44-171-896-2275 Fax
Power in Asia	Financial Times 149 Tottenham Court Road London W1P 9LL, UK	44-171-896-2251 Tel 44-171-896-2275 Fax
Power in Europe	Financial Times 149 Tottenham Court Road London W1P 9LL, UK	44-171-896-2251 Tel 44-171-896-2275 Fax
Power in Latin America	Financial Times 149 Tottenham Court Road London W1P 9LL, UK	44-171-896-2251 Tel 44-171-896-2275 Fax
Global Finance	PARS Int'l Corp. 114 E. 32nd St., #503 New York, NY 10016	212-779-4469 Tel 212-779-4277 Fax
Independent Energy Magazine	Pennwell Company 1421 S. Sheridan Rd. Tulsa OK 74112	918-831-9776 Fax 918-835-3161 Tel

Independent Power Report	McGraw-Hill Company 1221 Ave. of Americas New York, NY 10020	800-223-6180 Tel
Infrastructure Finance	Institutional Investor 488 Madison Ave. New York, NY 10022	212-224-3300 Tel
International Private Power Quarterly	McGraw-Hill Company 1221 Ave. of Americas New York, NY 10020	212-224-3300 Tel
Project Finance International	Thomson Financial Svcs. Int'l., Aldgate House, 33 Aldgate High St., London EC3N 1DL	44-171-369-7524 Tel 44-171-369-7538 Fax
The Electricity Journal	Electricity Journal 1501 Western Ave. #100, Seattle, WA 98101	800-326-1676 Tel
World Cogeneration	One World Trade Center, Suite 7967 New York, NY 10048	212-432-7300 Tel
World Power	Lake & Park Suites, Thornton House Thornton Road, Wimbledon Village London, UK SW19 4NG	44-181-944-6688 Tel 44-181-946-1815 Fax

Glossary

Administrative and Management Expenses	The customary, routine, and necessary costs and expenses incurred by a power project owner to manage the commercial aspects of the power plant business, such as billing and collection, accounting, legal and any on-going expenses during operations.
Available hours	For a power plant for any period, the total number of hours in such period less the number of hours attributable to scheduled maintenance and planned overhauls as well as to forced outages, adjusted for partial capacity outage hours.
Availability factor	A measure of how much a power plant is available to produce power, usually expressed as the ratio (a percentage) of a power plant's available hours to the total number of hours in such a period.
Behind-the-fence	The electrical demand of an industrial facility or an industrial park. The "fence" refers to the boundary between the Grid and the industrial facility.
BLT	Build, Lease, Transfer. A financing arrangement wherein a party agrees to develop and build a power plant, then sell and lease it back for a period of years (usually between 10 to 30 years), and then transfer the facility to an entity in the government, a corporation, or a joint venture partner. The transfer price may be fixed, may be fair market value, or may be zero.
BOOT	Build, Own, Operate Transfer. A financing arrangement wherein a party agrees to develop and build a power plant, and own and operate it for a period of years (usually between 10 to 30 years), and then transfer the facility to an entity in the government, a corporation, or a joint venture partner. The transfer price may be fixed, may be fair market value, or may be zero.

BOT	Build, Own, Transfer. A financing arrangement wherein a party agrees to develop and build a power plant, and own it for a period of years (usually between 10 to 30 years), and then transfer the facility to an entity in the government, a corporation, or a joint venture partner. The transfer price may be fixed, may be fair market value, or may be zero.
BTU	British Thermal Unit. A measure of heat energy. One million BTU's (or MMBTU) is approximately the heat energy in one thousand cubic feet of natural gas. One kilowatt-hour of electrical energy is equivalent to 3,412 BTUs.
Capacity	The electrical output of a power plant, usually measured in megawatts. Gross capacity is the total output; net capacity is after taking into account the internal electrical usage of the plant.
Capacity factor	The ratio (expressed as a percentage) of a power plant's available hours to the total number of hour in such as period.
Capacity Payment	In the case where an independent power plant is selling electricity pursuant to power sales agreement and the total payment is broken into an Energy Payment and a Capacity Payment, the Capacity Payment is the payment for the power plant being available to produce energy, as measured in kilowatts. The Capacity Payment usually covers fixed costs that are attributable to building the plant and setting up the related infrastructure to enable production, such as capital costs, fixed fuel arrangements, fixed operation and maintenance payments, and other charges that are invariant to production levels.
Cogeneration	The sequential production of two or more forms of useful energy (i.e., electricity and heat) from a fuel source.
Construction Period	The time period that begins with the construction of a power project, and ends with the establishment of commercial energy production, or ends when the owners accept that the power project as completed facility.

Corporate Finance	Corporate finance is financing extended to a corporation where the repayment and return on capital is the result of any activity undertaken by that corporation. In the case of Corporate Finance, the investor is not relying on only a specific activity for return of capital.
Demand	For an integrated power system, the amount of power demanded by the consumers of energy at any point in time.
Developer	The party, or parties, that undertake the preparatory steps of implementing a power plant project, including negotiating key project documents, or participating in a competitive bid in to sell electricity, and undertaking the necessary engineering permitting, legal, siting, and financial tasks.
Development Period	The time period that begins with the conceptualization of a power project, and ends with the commencement of construction.
Dispatch	The schedule of production for all the generating units on a power system, generally varying from moment to moment to match the production with power requirements. As a verb, dispatch means to direct the plant to operate.
DSM	Demand Side Management. The practice of finding and implementing methods to cut electrical energy usage and/or cutting costs by shifting usage patterns, or negotiating more favorable energy supply arrangements.
Due Diligence	The practice of researching the feasibility of a project including evaluating contracts, visiting the project site, meeting with project participants, building a financial model, and confirming key legal and regulatory aspects.

Energy Payment	In the case where an independent power plant is selling electricity pursuant to power sales agreement and the total payment is broken into an Energy Payment and a Capacity Payment, the Energy Payment is the payment for electrical energy delivered, as measured in kilowatt-hours. The Energy Payment usually covers variable costs that are attributable to production, and not fixed costs.
Equity Investor	A party that invests in a power plant in exchange for an interest that has certain financial characteristics: variable rate of return, uncertain repayment timing and amount, and the use of tax benefits of ownership.
Equity Kicker	Additional compensation or rights that may be obtained in connection with a loan to a project or company, following the lender to obtain equity interest in the project or corporation. This may include options to purchase equity interest on favorable terms, warrants, preferential rights, to convert debt to equity, or other similar rights.
Grid	The electrical transmission system that is receiving electrical energy from independent power plants, utility power plants, and generation from outside the grid region.
Gross Electrical Capacity	The electrical production capacity (expressed in KW or MW, as appropriate) of a power plant, before taking into account Parasitic Load.
GW	Gigawatt. One million kilowatts.
GWh	Gigawatt-hour. One million kilowatt-hours. GWh is typically used as a measure for the annual energy production of a large power plant.
Installed Capacity	The manufacturer's rated power output of a generating unit or a power plant, usually denominated in MW.
Internal Use	Same as Parasitic Load.
kV	Kilovolt. One thousand volts.

kWh	Kilowatt-hour. The standard unit of energy used in the electric power industry. One kilowatt is the amount of energy produced by a generator producing one thousand watts of electricity for one hour.
Lender	A party that invests in a power plant in exchange for an interest that has certain financial characteristics: fixed rate of return, date-certain repayment, and lack of use of tax benefits of ownership.
Merchant Power Plant	A power plant that is developed and built without long-term, firm contracts to sell electricity.
Mezzanine Financing	Two meanings: 1) Financing that has some of the characteristics of debt and some characteristics of equity, such as a fixed repayment schedule plus an Equity Kicker; 2) An investment that is less risky and more mature than venture capital, but more risky and less mature than corporate lending.
MVA	Million volt-amperes. A unit of measure used to express the capacity of electrical equipment such as transformers.
MW	Megawatt. One million watts. The installed capacity of power plants is generally expressed in MW. A Megawatt equals approximately 1,340 horsepower.
MWh	Megawatt-hour. One thousand kilowatt-hours.
Operation and Maintenance Cost	The customary, routine, and necessary costs and expenses incurred by the party responsible for operating the power plant, including, as applicable, operating and maintaining the generation system, fuel system, transformers, emissions control systems, installing spare parts, minor and major overhauls, and coordination with the grid.
Operation Period	The time period that starts with commercial energy production, and ends with the earlier of 1) the end of the useful life of the equipment, or 2) the transfer of the facility (in the case of a BOT) to another party.

Parasitic Load	(Also called Parasitic Demand) Electricity consumed by the plant in the production of Gross Electrical Capacity, for pumps, conveyers, compressors, and other electromechanical devices.
Peak Load	The maximum demand on a power plant or power system during a specific period of time.
Project	An independent power plant, or a proposed independent power plant, including the preparatory work such as engineering permitting, legal, siting, and financial undertaken in anticipation of constructing.
Project Finance	An arrangement of financing set up for a specific project or special-purpose enterprise, rather than financing for a corporation engaged in more than one business activity. Project Finance is usually based on contracts that mitigate risk rather than market-based price and supply risk.
Rate of Return	A measure of an equity investor's profitability from an investment over time.
ROT	Rehabilitate, Own Transfer. A financing arrangement wherein a party agrees to purchase and rehabilitate an existing power plant, and then own and operate it for a period of years (usually between 10 to 30 years), and then transfer the facility to an entity in the government, a corporation, or a joint venture partner. The transfer price may be fixed, may be fair market value, or may be zero.
Steam Host	Usually an industrial company or industrial park that consumes the thermal energy output of a cogeneration plant.
Transmission Losses	Electrical energy that is lost as heat in the transmission line conductors and therefore unavailable for use.

Sources of Financing for Projects under $100 Million

Energy Investors Fund
Mr. Barry Neal, Director of Development
591 Redwood Highway
Mill Valley, CA 94941
tel: (415) 380-0520, fax: (415) 380-0527

Energy Investors Group, A subsidiary of Dresdner Bank
Terence L. Darby, First Vice President, Energy/Utilities/Infrastructure
75 Wall Street
New York, NY 10005 - 2889
tel: (212) 429-2200, fax: (212) 429-2524

Environmental Enterprises Assistance Fund
Ms. Virginia Barreiro
1655 North Fort Myer Drive, Ste. 520
Arlington, VA 22209
tel: (703) 522-5928, fax: (703) 522-6450
E-mail: eeaf@igc.org
Website: http://www.eeaf.org

Global Environmental Fund
Mr. Brian Foist, Director of Finance
1201 New York Avenue, NW Suite 220
Washington DC, 20005
tel: (202) 789-4500, fax: (202) 789-4508

Inter-American Development Bank
Mr. Jamie Fernandez, Vice President
1300 New York Avenue, NW + F43
Washington, DC 20577
tel: (202) 623-1825

D.H. Blair Investment Banking
44 Wall Street, #2
New York, NY 10005
tel: (212) 495-5000

Conduit Capital Partners, LLC
Latin America Trust
Mr. J. Scott Swenson
477 Madison Avenue

New York, NY 10022
tel: (212) 485-8900, fax (212) 485-8939

E-mail: info@conduitcap.com

www.conduitcap.com

Ridgewood Renewable Power
Mr. John Barsh
947 Linwood Avenue
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www.ridgewoodpower.com

US EXIM Bank
Barbara O'Boyle, Vice President
Kristine Wood, Business Development
Project Finance Department
811 Vermont Avenue, NW
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1000 Wilson Blvd., Ste. 1600
Arlington, VA 22209-3901
tel: (703) 875 - 4357, fax: (703) 875 – 4009
E-mail: info@tda.gov